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CHICAGO THE CONVENTION CITY

There will be general satisfaction, we believe, in the decision of the location committee of the American Electric Railway Association to hold its next annual convention in Chicago. The association has met in Atlantic City for three years during the past four, and this has been thought by some, though erroneously, to indicate a settled preference for the East for the annual convention. An effort was made by the executive committee a year ago, however, to hold the 1911 convention in the Central West, but Chicago was found to be the only city at that time which possessed adequate accommodations in the way of exhibit hall and hotel facilities, and the Coliseum had been rented during the entire autumn. This year the association has secured the lease for exhibit and convention purposes of the Dexter Pavilion, corner of Forty-third Street and Halsted Street. This building has been used for a number of large exhibitions recently and possesses all the qualifications needed for an electric railway exhibition. In addition there are excellent meeting halls available in the neighborhood. In other respects also Chicago will make an ideal location for the convention this year. Prominent among its advantages is the fact that the surface railways have been rehabilitated during the past three years at great expense, and their new equipment will be most interesting to railway officials. Again, the hotel facilities in Chicago have been greatly enlarged during the past year or two, and there should be no difficulty in accommodating all of those who will be in attendance at the convention. Hence Eastern railway managers will welcome an opportunity of visiting Chicago next October. In spite of the distance it is really about as accessible from the Atlantic seaboard as Atlantic City, as it involves practically only a night's ride from any of the larger cities. Of course, it is close to all of the cities in the Central States, and there should be a large delegation from the Pacific Coast, to whom a trip only part way across the continent seems easier than to travel the entire distance. Altogether there should be a large attendance in Chicago by next October.

SYSTEMATIZING CAR CLEANING

From some points of view it would seem that car cleaning is one of the last classes of work capable of systematic analysis, but experience shows that this kind of service can in a measure at least become standardized, so that a minimum accomplishment can be attained in a given time and with a fixed number of men. That is, more efficient service can be secured and the work handled more specifically than in former days. The procedure is much the same as in laying out a schedule of piece work in the shop, and if desired there is nothing to prevent putting car cleaning on a sound piece-work basis. Whether the work is done by piece or by the hour, however, the pressure of the times demands the determination of the quantity of work which may properly be expected from a man in a given time when his pace is not forced beyond the steady productive rate which accomplishes the largest amount of work in a day consistent with the reasonable fatigue of diligent toil. The accuracy with which a schedule of car cleaning may be prepared is indicated by the following

figures showing the scheduled and actual times taken in a seventeen days' test: Platforms and steps, schedule 10 minutes per car, actual 11 minutes; headlights, 10 minutes and 8 minutes per car; dasher, 15 minutes and 16 minutes per car; interior, 1 hour and 48 minutes; curtains, 15 minutes and 15 minutes. These figures were taken practically at random from an extended schedule applied to the service in a single station and furnished the text for a thorough discussion of the possibilities at a subsequent meeting of carhouse foremen. It is obvious that allowances must be made for the type and size of car, weather conditions, carhouse cleaning equipment and car service in studying this question, but so far as the matter of tests indicates, it is apparent that a good deal can be done in local cases to put the work upon a tolerably scientific basis.

WHERE LIMITED FRANCHISES LEAD

A vulnerable point in the electric railway situation which should receive attention in the analysis of causes of unsatisfactory conditions is the limited franchise. The acceptance of a franchise limited as to time means the acceptance of a chance regarding the position of the company at the end of the grant. Neither the company nor the public ought to be in doubt concerning the true meaning of a limited franchise. If it is to be held that the company has no permanent rights to operate beyond the end of a definite term named in the ordinance, then both the company and the public should frame future contracts with full recognition of the fact in mind. If the company is to be stripped of the right to operate when the last day of the franchise term is reached, it should be allowed to charge rates high enough to pay a fair interest return on the investment and to return to its stockholders and bondholders the investment which their securities represent. If the company is not to forfeit all of its rights in the streets at the end of the franchise period and there is to be a new agreement on equitable terms, some measures so to protect the company should be included in the contract. Otherwise the company should charge a rate of fare high enough to amortize the capital investment. If the volume of the traffic was independent of the rate of fare, a company could afford to accept a very short-term franchise and at the end of the franchise to abandon its tracks or sell them at scrap value to the city. It would simply be a matter of arithmetic to determine how high a fare should be charged during this limited term so as to amortize the investment. But this is a condition which does not exist. The volume of traffic will always be affected to some extent by the rate of fare, although the inverse ratio between the two would not be constant or the same in every city. When the fare is higher than a certain critical amount, depending upon local conditions, so many people would walk or use other conveyances that the net receipts of the railway company would decrease. Hence, there is at least theoretically a maximum fare which can be charged and consequently there is a minimum limit to the length of franchise which can be accepted. It is not the purpose here to consider this relation, but simply to point out two things. One is that a short term of franchise is incompatible with low fares, and the other is that no company should accept a limited franchise which will terminate before the net earnings of the company are sufficient to pay a reasonable return on the capital and also to retire that portion of the investment which cannot be turned into cash at the end of the franchise term.

THE REDISTRIBUTION OF URBAN TRAFFIC

The completion of new rapid transit routes in cities of the larger size generally effects changes in the distribution of traffic which are not only far-reaching in their influence upon the community but are often unforeseen by the public. There must always be an element of uncertainty in the results of establishing a service untried by the public, but in most cases the experienced manager realizes far better than his patrons imagine what is likely to follow the inauguration of additional or modified lines of traffic.

Boston affords an interesting example of traffic changes of this kind. The completion of the Washington Street tunnel meant the withdrawal of electric train service from the parallel Tremont Street subway and the restoration of single-car operation in the latter tube, after it had been used for almost a decade as the chief downtown collecting and distributing agency of the rapid transit system. The transfer of the radial suburban train service between the outlying terminals at Sullivan Square and Dudley Street and the business center was a move in the direction of improved service and operating economy, and was welcomed by substantially all the patrons of the company. Merchants doing business near the Tremont Street subway stations, and particularly in the Scollay Square district, protested against the removal of the trains and endeavored without success to have them restored by legislative action. Others protested against the cessation of elevated train service by the former short route between the Park Street subway station and the South Station, although under the new arrangement a walk of only a block was required to reach a frequent and fairly rapid surface car service to and from the latter point.

The company has met these conditions by establishing new transfer points in certain nearer suburban municipalities and by providing for the operation of additional cars through the district in which the principal complaints arose. Other routes were extended on the surface through the area in which business had decreased as a result of the withdrawal of the elevated trains from the underground line. By these changes traffic conditions on the north and south were relieved to a considerable degree, and demands for the restoration of the train service have ceased. The South Station problem was at least temporarily solved by the institution of a free transfer point between the old subway lines and the surface system at Boylston and Tremont Streets, and by the maintenance of a frequent service to and from the Atlantic Avenue district and the old subway station at Boylston Street.

These methods of treating the problem of redistributed traffic illustrate the flexibility of electric car service when operated by a single company. It is probably true that in Boston the fitting together of surface and subway transportation has been carried farther than in almost any other city of the world, but this fact in no wise diminishes the value of traffic analyses and changes in routes of surface lines as a means of equalizing conditions. The possibilities

of the establishment of a new surface route are not always appreciated, either in relation to traffic formerly existing or as a means of more successfully competing with rival transportation agencies. A short-cut surface line with a frequent car service will sometimes enable a company to capture a considerable patronage formerly enjoyed by a competing steam line, and will show, as well, marked economies of operation. The cost of establishing such a route is ordinarily small if existing trackage and feeders can in large part be used. This fact is a great encouragement to the adjustment of the service to meet conditions of adverse character.

THE UTILIZATION OF LOW HYDRAULIC HEADS

The plant at Marseilles, Ill., described in another column, is one particularly well worth study on account of the unusual hydraulic requirements that had to be met in planning it. The early development of electric power transmission in this country was largely on the Pacific coast, in a region where the mountain streams plunge down to the plains with great suddenness and the common hydraulic heads are reckoned in hundreds of feet. This was followed by an extension of the hydroelectric work in the East along the rivers having their rise in the Appalachian chain where heads, while very low compared with Pacific coast practice, were still ordinarily 25 ft. to 50 ft. The great basin of the Mississippi River presents radically different conditions. Enormous volumes of water are often available, but usually the possible fall is small. The 11 ft. of effective head found in the Marseilles plant is perhaps a good average for the hydraulic resources of the Middle West, yet no part of the country is more active in manufacturing and nowhere would cheap hydraulic power be more welcome.

The Marseilles plant utilizes water from the Illinois River, which was first dammed at that point some forty years since. Power is still supplied to local industries from the fall thus made available and also to the plant here described. The great difficulties in utilizing so low a head for hydroelectric work are the very low speed of the wheels, if the individual wheels are to be of any considerable power, and also the regulation, which becomes increasingly difficult as the head falls. There is also very frequently extreme trouble from drowning out the wheels during the times of flood, and often extraordinary means have to be taken to secure anything like uniform speed of the wheels on account of the variable head. In this particular instance the trouble from variable head is less than would be found in many comparable plants. With only 11 ft. head available, large horizontal turbines are practically out of the question, and one is driven to vertical shaft construction. It has been not unusual in such cases to install several turbines with vertical shafts connected with beveled gears to a common driving shaft by which, either directly or indirectly, the generator is driven. In this way it becomes possible to combine several fairly high-speed wheels on a single generator which can then be of normal construction and speed. The objection to this plan is the loss of efficiency in the gearing and a rather excessive amount of space taken. Such construction calls for unusually costly mechanical equipment and a loss of energy in the gears greater than would ordinarily be found in change of design in the dynamo to adapt it to lower speed. However, a number of American plants, some of considerable size, have been worked out on the old bevel-gear plan which was familiar to the hydraulic engineers of half a century ago.

Foreign practice has gradually drifted away from this construction for hydroelectric work toward the use of special very low-speed generators, direct-connected to the waterwheel on the vertical shaft. C. E. L. Brown, in the early days of electric transmission, built several equipments of this character, one of them, if we remember correctly, having a speed as low as 20 r.p.m. The cost of generators, of course, is largely increased by such special construction, but it tends to simplification of the plant and considerably lessened repairs. In the Marseilles power house this later plan of operation has been adopted with admirable results, so far as the newer part of the installation is concerned. An old hydraulic equipment inherited from an earlier company did not lend itself readily to this arrangement and was installed in the new power house along the old lines, three 62-in. turbines being geared to a common horizontal shaft driving a single generator, in such groups as fully to utilize the old equipment. The new units are of 320 kva each. The generators are of a typical umbrella type, each directly driven from a 74-in. vertical shaft turbine at 75 r.p.m.

One specially interesting feature of the equipment is the means taken to support the weight of the revolving parts, necessarily considerable, since in addition to the runner of the turbine the rotor of the generator is some 10 ft. in diameter. The low head and considerable weight were unfavorable to the use of the ordinary water-step support, so in this case the entire weight of the revolving parts is taken on a carefully designed roller bearing, oil-lubricated, at the top of the umbrella. In other words, the rotor and the runner are hung from a thrust bearing at the very top of the unit, where they can be inspected with the greatest readiness. The arrangement is such that the rotor and, if necessary, the runner can be very conveniently lifted out by the traveling crane so that the whole equipment is easily exposed for repairs. Each individual turbine is controlled by a quick-acting governor, operated by pressure oil and controlled by a push-button switch on the main board, so that the speed of the machines can be very easily adjusted for the purpose of synchronizing. The installation of these generator sets greatly simplified the hydraulic arrangements of the plant, and it is safe to say that the new section built in this way will show less repairs and be much more easily handled and overhauled than the old section.

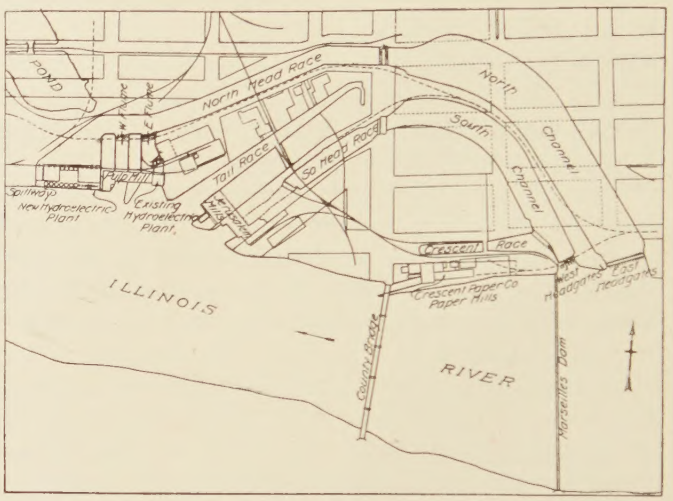
Standard generators are, of course, cheaper than special ones, yet in cases like this wise specialization leads to considerably better results than can be attained by an attempt to make apparatus built to meet average requirements fit unusual conditions. Umbrella-type generators are by no means confined in their usefulness to low-head plants, as witness their use at Niagara, but in this particular instance they were beautifully suited to the conditions which had to be met. It is an occasional plant of this kind that gives us hope of real progress in engineering, in spite of the common tendency to utilize something that may answer the purpose merely because somebody has classified it as standard.

New Hydroelectric Station of the Northern Illinois Light & Traction Company at Marseilles, Ill.

An Extremely Low-Head Water-Power Development on the Illinois River Which Feeds Transmission Lines for a 125-Mile Interurban Railway and Serves Six Small Electric Light and Power Systems

The McKinley properties in Northern Illinois, which include the Northern Illinois Light & Traction Company, the Chicago, Ottawa & Peoria Railway, the Consolidated Water & Light Company, of Marseilles, and the Citizens' Lighting Company, of La Salle, are now receiving energy from a new hydroelectric station at Marseilles, Ill., located 35 miles southwest of Joliet on the Illinois River. The station was first put in service in October, 1911. At that time, however, the equipment had not all been installed and the station was used only to assist the combination hydroelectric and steam plant of the Northern Illinois Light & Traction Company at Ottawa and the steam station at La Salle, which was feeding the Chicago, Ottawa & Peoria Railway's 125-mile interurban line, described in the Electric Railway Journal for Dec. 30, 1911, page 1306. The new station will be operated in parallel with these two stations. The former will be operated as a swing station which will assume the peak loads, and the latter will be cut in on the line only in case of a complete shutdown.

It is of historical interest to note that the Marseilles Land & Water Company, a corporation now headed by W. D. Boyce, of Chicago, first constructed a dam across the Illinois River at Marseilles and sold water rights more than forty years ago. This has since been replaced by a concrete ogee dam and now supplies water for the operation of several large manufacturing plants located in Marseilles. Under normal conditions there is an excess of water, and the right to use this surplus, along with a number of long-term water-right leases, was acquired about two years ago by the McKinley interests. At this time these interests also purchased a small lighting company known as the Consolidated Water & Light Company, of Marseilles, and a short railway known as the Manufacturers' Terminal Railway. The purchase of these two latter properties furnished sufficient land half a mile below the dam at the lower end of the water supply channel on which to build the new power plant. The relative locations of the plant, the north channel and the dam are shown in the accompanying map. The water for the manufacturing industries is supplied through three separate channels; these have been cross-connected by overflows placed at such elevations as not to reduce the actual water requirements of the existing industries and yet to supply the new hydroelectric station with the surplus water. The head gates to the north channel, which furnish the water supply for the new plant, are located approximately 2400 ft. away, and the water flows through a channel averaging 80 ft. in width and 17.5 ft. deep.



Marseilles Power Station—General Plan of Property

Station Construction Features

The new power station building, which conforms in design to the Illinois Traction System standard substations, is 229 ft. long by 40 ft. wide and has a transformer annex 38 ft. 8 in. by 77 ft. 2 in. in plan. The clear head room is 26 ft. in both sections of the station. A water supply pumping station and heating plant annex, 18 ft. by 53 ft. in plan, is located at the east end of the main building.

The building materials included reinforced-concrete flumes, foundations and floors, a rock-faced, dark cherry-red paver wall base, and buff-colored face brick laid in mortar colored dark red. The cornice, which has a 3-ft. overhang, is of built-up wood construction, bolted to the steel trusses and purlins, which support a roof covering of dark red French "A" tile with ornamental finials and terminals laid on 2-in. matched sheathing which was first covered with a two-ply tarred felt. The exposed woodwork is

Marseilles Power Station—View from Head Race

painted in the standard colors, buff and olive green, and the inside finish consists of plain white painted ceiling and walls with a dark green base and black exposed ironwork. The choice of materials gives the completed structure a very handsome appearance.

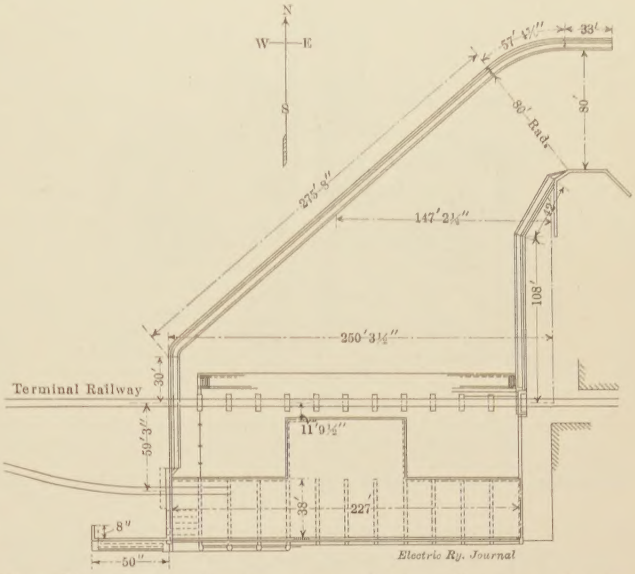
The station is provided with ample track facilities for handling equipment. A spur from the Terminal Railway extends into the west wing of the building and under a Case electric crane which has runways extending the full length of the main building. The crane is of 20-ton capacity and has an auxiliary hoist which is used to operate the emergency steel gates employed to shut off the water supply to the individual turbine flumes. It was installed as soon as the steel work was completed, and the engineers state that the crane probably paid for itself by reduced cost of handling all the station equipment during the construction installation.

WATER TURBINE AND FLUME CONSTRUCTION

The engineers determined, after they had made careful tests of the surplus water supply during an extreme low-water period in June, 1910, that the minimum power to be obtained would be 4500 hp with an 11-ft. head. The turbine installation to develop this minimum horse-power consists of six new 74-in. Samson Special water turbines operating at 75 r.p.m., six 62-in. Samson turbines which were formerly in the plant of the Consolidated Water & Light Company, and two 40-in. Samson Special turbines. As mentioned previously, each turbine has an individual flume controlled during an emergency by large built-up steel gates which are kept on the station floor level and are lowered through openings in the floor by the electric crane. These floor openings are covered with reinforced-concrete slabs built in structural steel frames and are provided with two rings countersunk to the level of the floor. In case it is necessary to close the flumes for an extended period, wooden stoplogs may be inserted in slides provided on the turbine side of the gates and the steel gates removed. Slots also are provided on the outlet side of the discharge flumes so that they may be cut off from high water in the river, thus making the lower parts of the water turbine accessible at all times for repair.

TRASH RACKS AND SHEER BOOM

The trash-rack bars and separators were designed especially for this station and are shown in the illustrations. They are built in sections 245/8 in. x 16 ft. No part of the steel work extends above the water level, and thus the tendency to form anchor ice during periods of low temperature is reduced. The racks and their supporting structure are designed so they will withstand the entire head of water in case an ice gorge should form, and the steel work



Marseilles Power Station—General Plan Showing Forebay and Position of Power Station

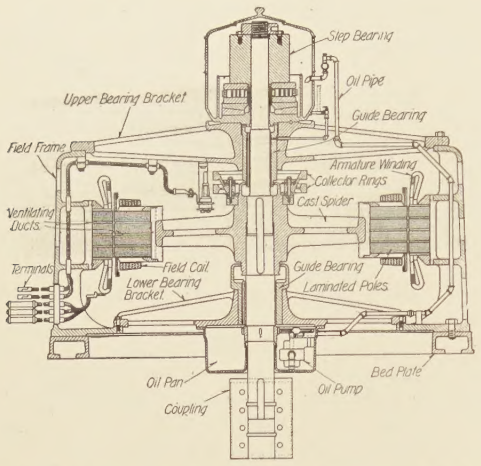
which supports the racks also serves as a portion of the bridge which carries the Manufacturers' Terminal Railway track over the forebay. An illustration of the rack-supporting structure and bridge is shown. The sheer boom, which presents a novel feature in its installation in that it is anchored to ten uniformly spaced reinforced-concrete piles carried up from the bottom of the forebay, is so located that it deflects practically all the floating trash to the spillway at the extreme west end of the station building.

Marseilles Power Station—Interior Showing Frequency Changes and Umbrella Type of Generator

ENERGY DEVELOPMENT

Each 74-in. turbine is direct-connected to a 320-kva Westinghouse generator located on the building floor level and supported by heavily reinforced concrete beams between

the flume walls, as shown in the transverse section of the station. Four of the generators supply 25-cycle, 2300-volt a.c., stepped up to 33,000 volts, for the Chicago, Ottawa & Peoria Railway, and two furnish 60-cycle, 2300-volt a.c., stepped up to 33,000 volts, to a transmission line serving six small lighting and power companies. An additional

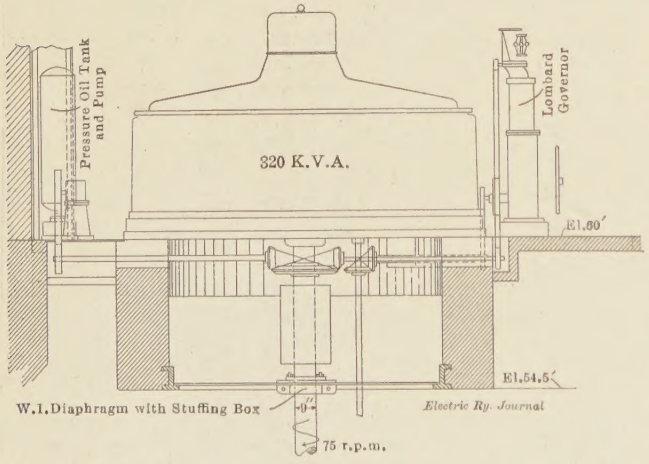


Marseilles Power Station—Umbrella Type of Generator

flume has been provided for a seventh turbine and generator which will be installed when the power consumption demands it. Direct-connected water turbines were recommended for the new part of the installation, even at a higher first cost than for gear-connected units. The higher efficiency of the direct-connected units and the fact that the equipment could be continuously loaded to approximately 100 per cent of its rating warranted their installation.

The six old 62-in. Samson turbines are divided into groups of three machines and each group is gear-connected to a horizontal shaft generator. One generator is a new 500-kva, 25-cycle, 2300-volt a.c. Westinghouse unit operated at 225 r.p.m.; the other generator is an old 450-kw, 60-cycle, 2300-volt a.c. General Electric unit operated at 200 r.p.m., which was taken from the old plant of the Consolidated company.

Each water turbine is individually controlled by a Lombard one-second-movement hydraulic governor. Interest-



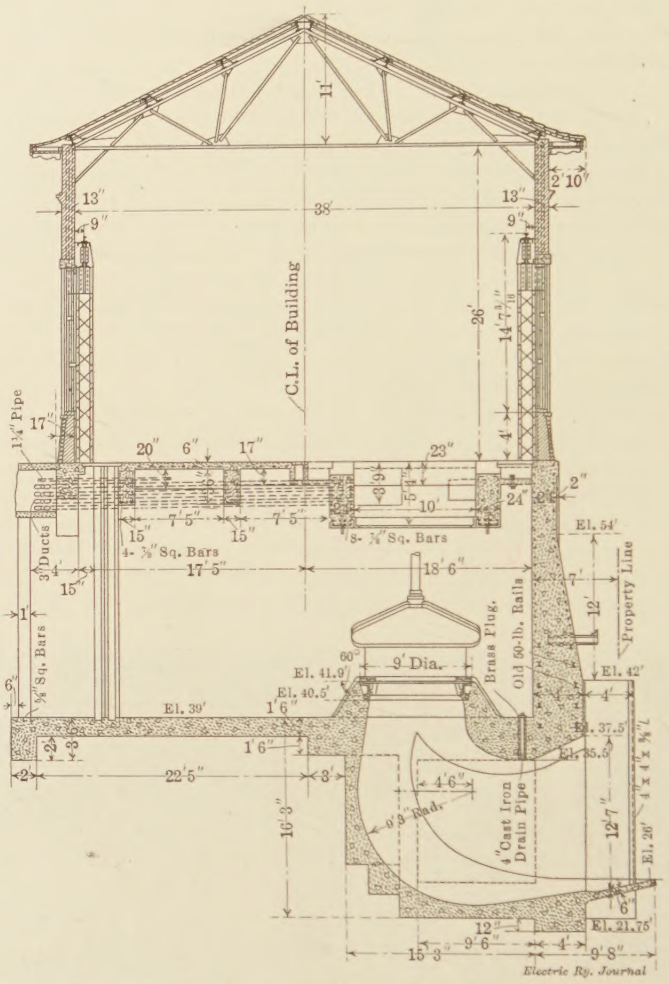
Marseilles Power Station—Generator Showing Method of Support

ing features in the governor installation are that each generator is not only provided with a governor, but with separate oil tanks and pumps which maintain the oil supply at 200 lb. pressure, and that the governors are controlled through push-button switches located on the main switchboard, thus enabling the operator to adjust the speed of the generators when synchronizing.

FREQUENCY CHANGER AND EXCITATION

Owing to the decrease in the demand for 60-cycle current during the day and the increased demand for 25-cycle current for interurban service, a 750-kva, 60-25-cycle frequency changer set, operating at 300 r.p.m., was included in the station equipment. This is of sufficient size to allow the entire generating capacity of the plant to be utilized for either the 60-cycle or 25-cycle load.

A point of special interest in the design and installation of the frequency changer is the amount of floor space required. It occupies 105 sq. ft., a minimum for this type of machine, and the reduction in the required floor area was obtained by making the set two-bearing, with the generator and motor located a minimum distance apart. The end



Marseilles Power Station—Section Through Main Building

bells are inclosed on the adjacent sides of the two machines, thus assuring effective ventilation. The set is also self-starting in that it is brought up to speed by operating the motor as an induction motor, making synchronizing devices unnecessary.

The excitation is obtained from two 90-kw Westinghouse exciters, direct-connected to the two 40-in. water turbines operating at 100 r.p.m., and one Westinghouse motor-generator exciter of 100-kw capacity. The latter was provided in case of any serious interruptions from ice gorges in the river below the station. It may be operated in case of a complete shutdown by current supplied from an outside source to furnish excitation to the frequency changer for interurban service.

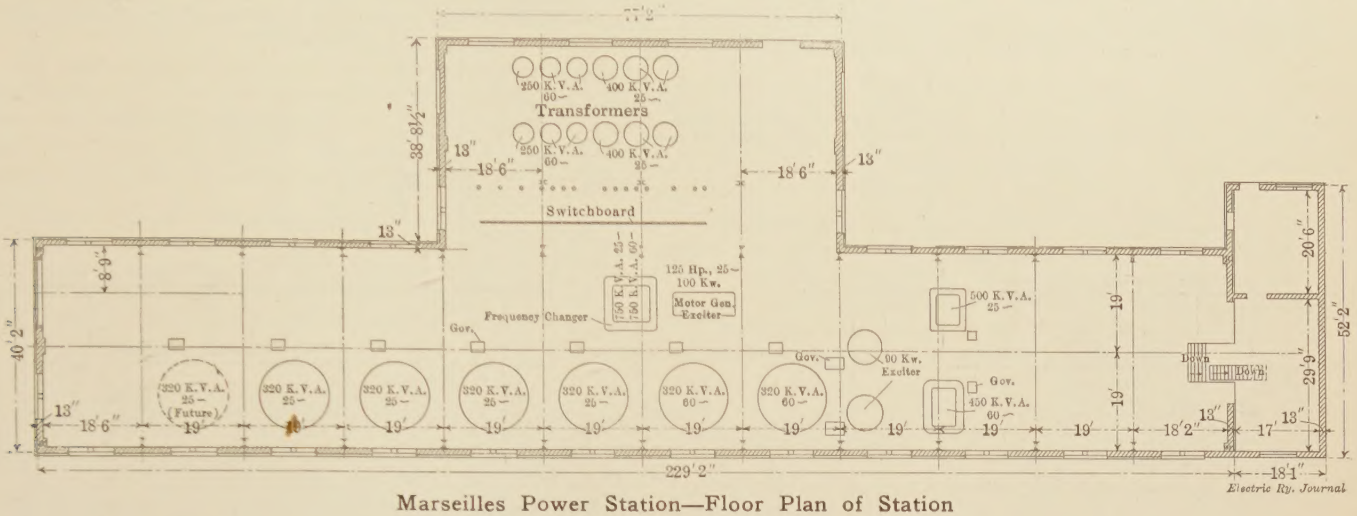
SPECIAL FEATURES IN GENERATOR CONSTRUCTION

Decidedly the most interesting feature of the entire installation has been worked out by using the new umbrella-type Westinghouse generators. The use of this new type of unit, the first cost of which is somewhat in excess of the ordinary form, enabled the engineers greatly to reduce

the labor cost of installation and at the same time provide ample means for keeping down the operating charges. An important point in the design of this new umbrella-type unit is the extremely low speed required for operation, 75 r.p.m. This speed is obtained with what would appear to be a minimum diameter of rotor, approximately 120 in.

CONVERTING AND AUXILIARY APPARATUS

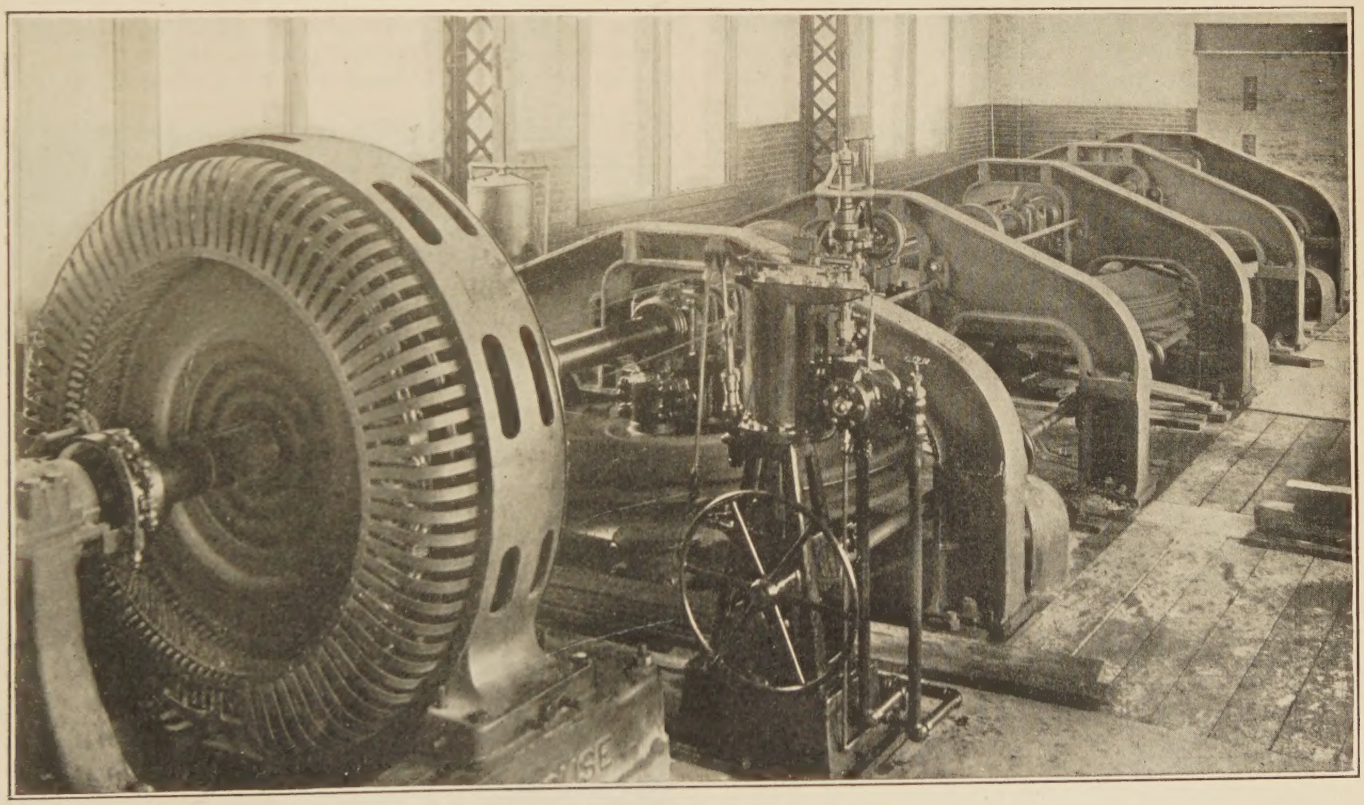
The transformer annex contains a twenty-two-panel 2-in. blue Vermont marble switchboard, six 250-kw transformers and six 400-kw transformers, all of the Westinghouse water-cooled, oil-insulating type. They are mounted on small steel trucks so that in cases of emergency they may



Marseilles Power Station—Floor Plan of Station

All of the rotating parts in both the generator and water turbine below are supported on a roller thrust bearing at the top of the machine. This permits of easy inspection or access for necessary repairs. Another point of interest is that not only the upper spider and rotor may be removed by the electric crane, but the generator and foundations are designed so that the turbine shaft and runner may be lifted

be readily handled by way of a narrow-gage track and turntable to a position under the electric crane. The water for cooling purposes is supplied from the headrace by a triplex motor-driven pump. For emergency purposes the transformers have been connected to the city water supply so that in case the pump should fail an automatic valve on the city connection will operate. The electrolytic lightning



Marseilles Power Station—Gear-Connected 500-kw Unit

out of the flume through the opening made after the removal of the rotor and lower spider.

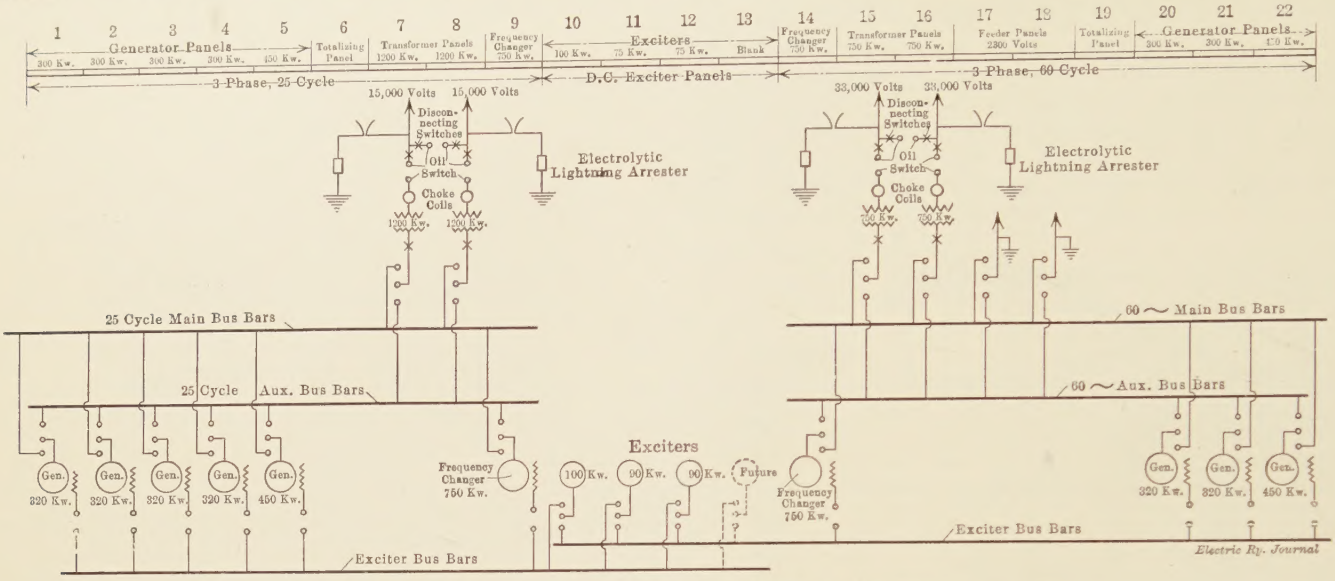
The method of oiling the generator bearing is also interesting. An oil pump, gear-connected to the main driving shaft at the base of the generator, has been installed. This forces the oil to the thrust bearing at the top of the generator, and it returns to the oil-supply tank by gravity.

arresters, the generator rheostats and two oil circuit breakers of the remote-control, hand-operated type are located on a gallery over the switchboard. This equipment was also furnished by the Westinghouse company.

WIRING TUNNELS AND CONNECTIONS

A continuous wiring tunnel, built with reinforced-concrete walls and a steel-plate floor, runs under the six

umbrella-type generators. This not only gives free access to the varnish and cambric lead-covered cables and connections by means of grates located between the generators but also furnishes access to the lower bearings of the generators. The bottom of this wiring tunnel is below the

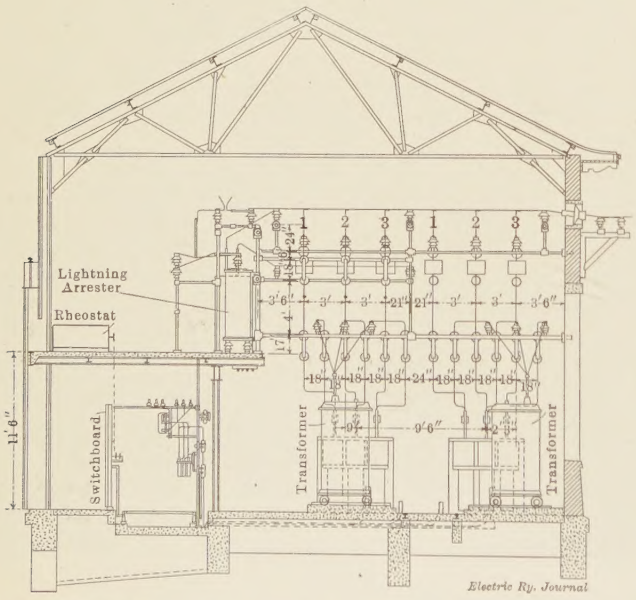


Marseilles Power Station—Switchboard Diagram

extreme high-water level so that waterproofing was necessary on the concrete, and stuffing boxes had to be provided for the turbine shafts where they pass through the tunnel floor.

The cables are carried from this tunnel through the flume walls in 3-in. bituminized fiber conduit to a similar tunnel located along the rear of the switchboard, which is covered with wooden grating, and from this point the high-tension wires are carried overhead on pipe racks.

There are four outgoing, three-phase transmission lines supported on two reinforced-concrete pole lines, one of which extends about 20 miles east and west from the plant and is built along the Illinois-Michigan canal bank. The

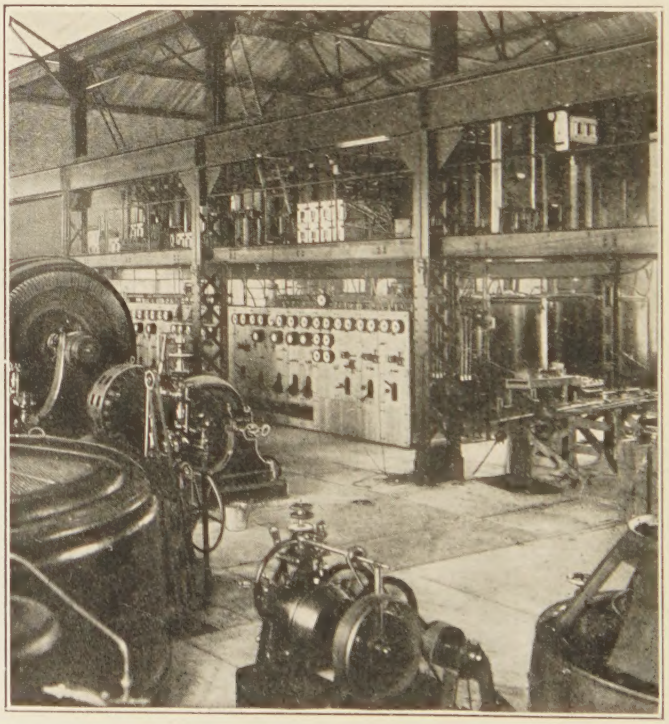


Marseilles Power Station—Section Through Transformer Annex

other connects with the pole line of the Chicago, Ottawa & Peoria Railway.

PRESENT OUTPUT AND STATION CAPACITY

Since October the total load has been increased as fast as the installation of the equipment would allow, and the station is now delivering 2870 kw. The addition of a 320-kva unit, the installation of which will be delayed until the total demand requires it, will increase the rated capacity to 3190 kw. The generators, however, were all designed to allow for a 25 per cent overload, which will increase the capacity to 3990 kw. This exceeds the minimum available horse-power. In view of the fact that the water supply from the river is continually on the increase and that minimum power will be obtained only two months out of the year, the engineers took advantage of the situation by increasing the station capacity. The increased water supply is due to the Chicago Drainage Canal, for which the Illinois River furnishes an outlet. Under a federal act the flow through the drainage canal may be



Marseilles Power Station—Switchboard and Transformer Annex

increased up to a certain limit which will not be reached for some time to come.

HEATING AND LIGHTING

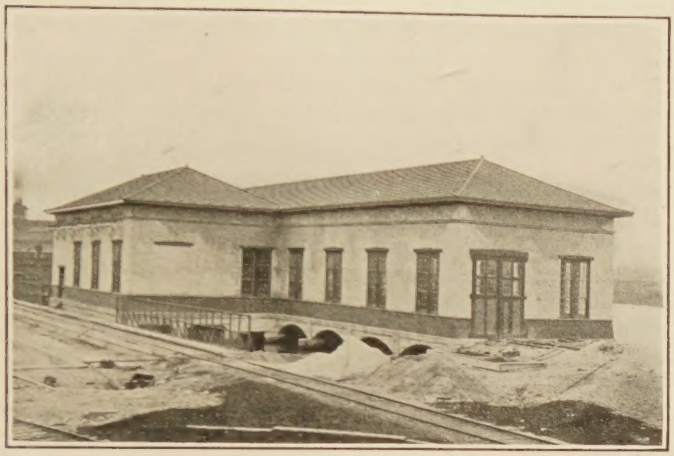
The heating plant, which is supplied with steam from the city water-supply pumping station, is of the low-pressure,

direct-radiation type, with all the feed mains located above the floor level. Each radiator is provided with a Crane tilting trap.

One-hundred-watt tungsten lamps furnish the illumination for the station and are so connected that current may be furnished from the exciters or from the generators. The lamps are supported on ornamental iron brackets located with a view to getting the best possible illumination.

CONCLUSION

The water-supply pumping plant for the city, which has been made a part of this hydroelectric station, was acquired under the terms of the transfer of the Consolidated company of Marseilles. While this adds, to a certain extent, to the total income of the station, the profits are small,



Marseilles Power Station—Method of Supporting Building Over Flume-Ways

owing to the fact that it is delivering only 950 gal. per minute through three direct-connected motor-driven pumps.

The Marseilles plant was designed by C. W. Humphrey, consulting engineer, Chicago, under the direction of H. E. Chubbuck, vice-president executive of the Illinois Traction System and the Western Railways & Light Company. The excavation, masonry and building construction work was handled by the L. E. Meyers Construction Company, Chicago. All the equipment was purchased and installed by the company under the supervision of Mr. Humphrey.

ORGANIZATION OF ILLINOIS ELECTRIC RAILWAYS TRAFFIC ASSOCIATION

Following a decision reached at the meeting of the Illinois Electric Railway Association on Jan. 9, a meeting of the traffic committee of that association was held at Springfield, Ill., Feb. 10. The purpose of the meeting, to which all of the traffic agents of the member companies of the Illinois Electric Railway Association were invited, was to discuss and draw up a contract to govern the use of interchangeable coupon tickets, as recommended by the report of the traffic committee at the January meeting. A majority of the member companies were represented, and various clauses in the proposed contract were considered. It will be submitted in its final draft for approval to the association at the March meeting.

In addition to discussing this contract the traffic men organized the Illinois Electric Railways Traffic Association. This association is to be auxiliary to the Illinois Electric Railways Association. A temporary organization was effected by the election of C. C. Shockley, of the Rockford & Interurban Railway Company, as chairman; Robert Barnett, of the Chicago & Southern Traction Company, as vice-president, and G. W. Quackenbush, of the Illinois Traction System, as secretary and treasurer.

A committee on by-laws was appointed by the chairman. It consisted of G. W. Quackenbush, A. W. Jordan and R. Breckinridge. This committee was instructed to report on by-laws at the next meeting of the traffic association, when the permanent organization will be effected.

A committee was also appointed for the purpose of securing data on the cost of a state map of the electric railways. This committee will make a report at the next meeting of the parent association. The committee consists of A. W. Jordan, R. Breckinridge and C. E. Patten. The meeting adjourned subject to call of the chairman.

INTERSTATE COMMERCE COMMISSION SYSTEM OF ACCOUNTS

The annual report of the Interstate Commerce Commission for the year ended June 30, 1911, which was mentioned briefly in the issue of the ELECTRIC RAILWAY JOURNAL for Dec. 23, 1911, says that with the work of that year the uniform systems of accounts for steam railways and express companies are practically completed. There remains, however, much work to be done to complete the systems of accounts for electric railways, sleeping car companies, pipe lines and water-line carriers. For electric railways classifications of accounts for road and equipment expenditures and for operating revenues and operating expenses have been prescribed, leaving for future consideration the matter of a form of general balance sheet statement and a form of income and profit and loss account statement. The report adds:

"In view of the circumstances attending the development and operation of the electric railways of the United States and the character of their traffic, it has been recognized that under present conditions a very large proportion of such railways should not be considered as engaging in interstate commerce, although, as noted in the last report, the tendency on the part of many to engage in the interstate transportation both of passengers and of freight and express matter has continued, and there are examples of the development of extensive traffic on numerous electric lines which seem to be ready to enter the field once solely occupied by the steam roads.

"The work of the division of statistics relating to the electric railways has been of a rather preliminary nature, looking in part toward the establishment of a full and satisfactory list of the companies that are clearly engaged in interstate commerce and subject to the jurisdiction of the commission. The year ended June 30, 1911, was the fourth year for which detailed annual reports were required from electric railway companies, and it should be noted that the relative number of companies reporting has increased with each successive year. Because of the fact that the number of companies reporting is only a small fraction of the entire number in the United States, and their financial importance is even less in proportion, it has not been judged advisable to compile from their reports any figures for publication, although such reports are tested and analyzed in order to determine their reliability.

"It seems worthy of mention that nearly all the state commissions that have jurisdiction over electric railways have made use of forms for report substantially the same as those used by the Interstate Commerce Commission, thus contributing in large measure to a uniformity in requirements desirable for many reasons, among them the comparison of returns made to the various commissions."

It is reported that the committee charged with the work of studying the advisability of electrifying the Chilian State Railways from Valparaiso to Santiago, including the branch of Los Andes, covering a distance of about 150 miles, has made a favorable report. It has estimated the cost, if carried out by the government, at £2,177,692, while it is said that an American company has offered to do the work for £1,084,880.

Increases in Rates of Milwaukee-Northern Railway

Two Advances in Rates of Fare Have Been Made by This Company Since Operation Was Begun in 1907—Changes Are Due to Higher Costs and Result in Financial Improvement

Operation of the Milwaukee Northern Railway was begun on Oct. 28, 1907, and since that date two increases in passenger rates have been made necessary by the higher expenses of operation and taxes. This railway extends from Fifth and Wells Streets, Milwaukee, in a northerly direction to Sheboygan, passing through several communities, the principal of which are Cedarburg and Port Washington. The line of the company, as projected, originally included a road to extend in a northwesterly direction from Cedarburg to Fond du Lac. This section, however, has never been built, and, as franchises at intermediate points have been abandoned, there is no immediate prospect that this part of the project will be developed. The line of the company is largely single track, but double track exists for most of the distance between Milwaukee and Cedarburg. The construction of additional double track between those points is planned.

Competition with steam roads exists between some of the places reached. The Chicago, Milwaukee & St. Paul Railway operates a line which connects Cedarburg with Milwaukee, but has only two passenger trains a day in each direction. The Chicago & Northwestern Railway operates a line which connects Sheboygan and Port Washington with Milwaukee.

The first increase in rates, effective on Dec. 24, 1909, was established because of a large increase in taxes. The changes in rates are shown in Table I. For the year ended June 30, 1909, the company charged in its account for the year a total of $6,447 in taxes, or 2.9 per cent of its total operating revenues. Before the end of the calendar year 1909 notice of an increase in the valuation for tax purposes and of the tax rate was received, and it was apparent that there would be a large addition to the expenditure for this purpose. It was figured, in fact, at a little more than 8 per cent of the total revenue of the company from all sources. The amount charged for taxes in the fiscal year ended June 30, 1910, was $18,371. There was a material increase in earnings, so that this amount was equal to 6.8 per cent of the gross operating revenue for that year. This, it will be observed, was an increase of $11,924, or 185 per cent, making the total payment nearly three times as great as that of the preceding year. The increase in rates was a general one and was designed to afford greater revenue from nearly all points. The average increase in rates at all but competitive points was about 10 per cent. In explanation of the change in rates, Frederick W. Walker, vice-president and general manager of the company, issued a notice to patrons on Nov. 24, 1909, explaining the reasons for the action taken. This directed attention to the necessity of provision for depreciation, pointed out by the United States Supreme Court in the Knoxville Water case.

NOTICE ISSUED TO PATRONS.

The notice is as follows:

"The relations between our patrons and ourselves having been most cordial and pleasant, we feel it our duty to explain fully the conditions requiring an increase in our rates.

"You have been generous in your patronage and considerate in your criticisms of our shortcomings, and we, on our part, have endeavored to show our appreciation by maintaining a generous service at exceedingly low rates.

"This increase in rates which will go into effect on Dec. 24, 1909, is made necessary by the fact that the taxes paid to the State of Wisconsin for the year 1909 were a little in excess of 8 per cent of the total receipts of this company from all sources for the year ending June 30, 1909, as shown in the annual report of the Milwaukee Northern Railway Company to the Railroad Commission of Wisconsin, on file at Madison.

"This means that out of every $1 received 8 cents was paid over to the State as taxes.

"Beginning Jan. 1, 1910, an additional 1 per cent of the net income must be paid to the federal government at Washington as a corporation tax, thus increasing the burden.

"At every session of the Legislature the cost of operating is increased by law, and when the managements of railway properties protest against the enactment of laws increasing this cost they are given to understand in very plain terms that, as the people must pay the increase, objections by the managements on the ground of additional expense are unwarranted.

Table I.—New Rates Established on Dec. 24, 1909, and Old Rates Which Were Superseded.

	Old Rate.	New Rate.
1000-mile books	$13.00	$15.50
500-mile books	7.00	7.50
100-mile books	1.50	1.07
500-mile school mileage books	5.00	6.00
500-mile clergyman's mileage books	5.00	6.00
One-way tickets—per mile, cents	1.75	1.8
Round-trip tickets—per mile, cents	1.5	1.7

Cash fare paid on cars—no change.

"In addition, the United States Supreme Court, in the case of the city of Knoxville vs. Knoxville Water Company, has held that unless the management of the company provides for the depreciation of the property out of the earnings the loss must be borne by the corporation, and says further: 'It is not only the right of the company to make such a provision, but it is its duty to its bond and stock holders, and, in the case of a public service corporation at least, its plain duty to the public.'

"Under these circumstances sound business principles demand that an increase in rates be made at once, and it is hoped that experience will prove the present increase sufficient and not necessitate a further increase in the future."

It was evident after a short period that, while this change in rates would furnish some part of the additional revenue desired, it would not give the company all that was required to make provision for all expenses of operation, including depreciation and a return on the securities. It was therefore decided to make another increase in rates, effective on Jan. 5, 1911. Before this change was made a careful analysis was prepared to show the probable effect on the business. This analysis was based by Mr. Walker on the reports of conductors and was designed to show exactly what increase in total revenue from the different classes of tickets could be expected, provided there should be a normal addition to the traffic. The analysis showed incidentally what proportion of passenger business was carried through from one city, or incorporated community, to another. That is to say, the passengers who began and ended their trips at cities or villages were segregated from those who began or terminated their rides at highway crossings. It was found that 70 per cent of the total passenger revenue was received from persons who travel between cities and villages. The remaining 30 per cent was

received from passengers who began or ended the rides at highway crossings. These figures indicate an experience similar to that reported by George Allison, comptroller of the Wisconsin Electric Railway and the Eastern Wisconsin Railway & Light Company, in the article regarding the increases in fares on those lines published in the Electric Railway Journal of Dec. 16, 1911.

Table II.—Division of Receipts for October, 1910, Applied to Passenger Receipts for Year Ended June 30, 1910, of $194,237.98.

	Per Cent.	Total Revenue Year Ended June 30, 1910.	Per Cent of Increase in Rate.	Expected Increase.
Cash fares	22.27	$43,256.80	*	.....
One-way tickets	20.06	40,013.02	*	.....
Round-trip tickets	41.02	79,676.42	5.88	$4,684.97
100-mile books	5.45	10,585.97	5.88	622.45
500-mile books	3.02	5,865.99	13.33	782.13
1000-mile books	5.34	10,372.31	10.34	1,072.49
School mileage books	2.38	4,622.86	25	1,155.71
One-way interline tickets	0.26	505.02	5.88	29.70
Round-trip interline tickets	0.20	388.48	*	.....
Totals	100.00	$195,286.87	....	$8,347.45
Deduct on account of school mileage (used only eight months) one-third of increase				357.49
Net increase				$7,989.96
If business increases 10 per cent, add 10 per cent				798.99
				$8,788.95

*No increase.

AVERAGE TRAFFIC MONTH TAKEN FOR ANALYSIS

In making the analysis Mr. Walker took the passenger revenue for October, 1910, as a fair example of the results of the average month. He distributed the revenue into the various classes of fares, tickets and mileage books. After finding the percentages of the total revenue furnished by each class of ticket he applied the percentages to the total passenger revenue for the fiscal year ended June 30, 1910. The result of the application of these figures is shown in Table II, published herewith.

The difference in the two totals of passenger receipts would have disappeared if the percentages had been carried to another decimal place.

This calculation shows that cash fares were figured on this basis at 22.27 per cent of the entire passenger revenue. One-way fares were figured at 20.06 per cent and round-trip tickets at 41.02 per cent. Thus these three classes aggregated 83.35 per cent of the total. The three forms of ordinary mileage tickets furnished a total of 13.81 of the total passenger receipts. The revenue from school mileage books was 2.38 per cent of the whole. The revenue from one-way and round-trip interline tickets was very small, aggregating only 0.46 per cent of the aggregate amount. The consolidation of these figures led to the decision to make no increase in the rates for either cash fares or one-way tickets, which aggregated 42.33 per cent of the total revenue. It was decided to make increases of like proportion in the rates for both round-trip tickets and 100-mile books. For 500-mile books it was decided to increase the rate 13.33 per cent, and for 1000-mile books to make a slightly smaller increase. The largest proportionate advance was made in school mileage books, which it was figured had been too low in comparison with the other rates. One-way interline tickets were not increased but round-trip interline tickets were increased to the one-way rate. This class of traffic, however, is very small. Based on these figures and a continuation of the traffic in the ensuing fiscal year that existed in the year ended June 30, 1910, the total increases in revenue of the company would be $8,347.45. There was deducted, however, from this amount the sum of $347.49 on account of the fact that the school mileage books, for which returns were given in the October report, are really used for only eight months of the year. Therefore only two-thirds of the increase figured from this source would be realized by the company.

Table III.—Financial Results of Operation During Three Years.

	Interurban Line. Year Ended June 30, 1909.	City Line	Interurban Line. Year Ended June 30, 1910.	City Line.	Interurban Line. Year Ended June 30, 1911.	City Line
Revenue from transportation	$184,104	$34,014	$220,094	$42,179	$246,413	$45,935
Revenue from operating other than transportation	4,566	.....	6,311	.....	5,913	.....
Total operating revenue	$188,670	$34,014	$226,405	$42,179	$252,326	$45,935
Operating expenses:						
Way and structures	11.049	1,904	12,825	1,935	11,965	2,319
Equipment	10,062	2,566	12,425	3,729	13,896	4,087
Traffic	1,227	6	1,467	.....	1,526	.....
Conducting transportation	77,812	16,525	80,447	19,628	80,219	20,844
General	4,214	1,090	4,964	1,324	6,460	1,492
Undistributed	9,548	1,237	10,497	990	7,390	1,202
Total	$113,912	$23,328	$122,625	$27,606	$121,456	$29,944
Taxes	6,447	.....	18,371	.....	18,981	.....
Operating expenses and taxes	$120,359	$23,328	$140,996	$27,606	$140,437	$29,944
Net operating revenue	$ 68,311	$10,686	$ 85,409	$14,573	$111,889	$15,991
Non-operating revenue	256	.....	317	.....	440	.....
Total	$ 68,567	$10.686	$ 85,726	$14,573	$112,329	.....
Add city income	10,686	.....	14,573	.....	15,991	.....
Gross income	$ 79,253	.....	$100,299	.....	$128,320	.....
Interest	70,800	.....	98,714	.....	60,000	.....
Surplus	$ 8,453	....	$ 1,585	.....	$ 68,320	.....

Table IV.—Traffic Statistics.

	Interurban Line. Year Ended June 30, 1909,	City Line.	Interurban Line. Year Ended June 30, 1910.	City Line.	Interurban Line. Year Ended June 30, 1911	City Line.
Revenue passengers carried	780,773	1,061,522	857,783	312,128	772,069	1,416,289
Transfer passengers carried	.....	.....	.....	.....	.....	37,436
Free passengers carried	38,917	10,976	25,548	28,312	17,472	.....
Total passengers carried	819,690	1,072,498	883,331	1,340,440	789,541	1,453,725
Passenger earnings per revenue passenger, cents	23.5	3.2	22.7	3.2	31.9	3.2
Total operating revenue per revenue passenger, cents	23.9	3.2	26.4	3.2	32.6	3.2
Operating expenses per revenue passenger, excluding taxes and depreciation, cents	14 5	2.1	14.2	2.1	15.7	2.1
Operating expenses and taxes per revenue passenger	14.1	..	16.4	..	18.2	2.1
Passenger car miles	674,917.5	247,104	732,885	296,118	728,412	302,131
Express or freight car miles	2,786.0	.....	16,334	.....	21,901	.....
Total revenue car miles	677,703 5	247,104	749,189	296,118	760,313	302,131
Gross earnings per revenue car mile, cents	27.8	13.7	30.2	14.2	33.1	15.2
Operating expenses per revenue car mile, excluding taxes and depreciation, cents	16.5	9.4	16.3	9.3	16.0	9.9
Oprating expnses and taxes per revenue car mile, cents	18.0	..	18.8	..	18.5	..
Total passenger car hours	36.341	28,386¼	37,598	31,643	32,869	31,635
Gross earnings per revenue car hour	$5.19	$1.19	$6.02	$1.33	$7.67	$1.45
Operating expenses (excluding taxes and depreciation) per revenue car hour	$3.13	$0.821	$3.26	$0.87	$3.70	$0.94
Operating expenses and taxes per revenue car hour	$3.31	.....	$3.75	....	$4.28	....

This left a net estimated increase of $7,989.96. It was also estimated that the natural increase in the business would add 10 per cent, or $789.99, to this figure, making a total increase in net revenue of $8,788.95.

INCREASE IN AVERAGE REVENUE PER PASSENGER

In connection with the general analysis described, it was shown that a material increase had taken place in the average revenue per passenger in the calendar year 1910 as compared with 1909, due mainly to the fact that passengers in 1910 rode a longer average distance than in the earlier year. The management attributes this largely to the service rendered by limited trains. The increase in fares, however, had some effect on these results. The figures showing these results for the calendar years 1909 and 1910 are published in Table V. Notwithstanding a decrease of 8 per cent in the number of revenue passengers, the increase in passenger revenue was 6.5 per cent. The gain in the average revenue per passenger was equal to 16 per cent.

Table V—Increase in Average Revenue per Passenger in the Calendar Years 1909 and 1910.

Interurban Lines.	1910.	1909.
Passenger earnings	$201,497.28	$189,203.31
Revenue passengers	793,314.00	862,000.00
Average revenue per passenger, cents	25.4	21.9

After full consideration of the figures it was decided to make some other changes in the ticket arrangements, such as the discontinuance of the sale of round-trip tickets at special rates. The following notice to the public in reference to the second increase was issued:

NOTICE OF SECOND INCREASE IN RATES

"From and after Jan. 5, 1911, the following changes in the passenger tariff of this company will be effective:

"The sale of round-trip tickets will be discontinued and single-trip tickets will be sold at present rates, good for passage in either direction.

"Mileage will be sold in books of 100 miles for $1.80; 500 miles for $8.50; 1000 miles for $16. This mileage will be good for transportation on the lines of this company only.

"The sale of school and clergymen's mileage will be discontinued, and monthly coupon books will be issued to bona-fide scholars at the rate of 1.5 cents per mile.

"Mileage of the Sheboygan Railway & Electric Company sold after Jan. 4, 1911, will not be accepted for passage on the lines of the company.

"An analysis of the receipts of this company shows that these changes are necessary."

Statistics of the results of operation of the company for three years are now available and are published herewith Table III shows the principal figures of revenue, expenses, charges, surplus, etc., for both the interurban and the Milwaukee city line. There has been a steady increase in revenue on both divisions during these years. The total operating revenue of the interurban line showed a gain of 20 per cent in the fiscal year 1910 as compared with 1909 and 11.4 per cent in 1911 as compared with 1910. The revenue of the Milwaukee city line amounted to $34,014 in 1909. In 1910 this was increased 24 per cent. The total received from the city line in 1911 was $45,935, or an increase of 8.9 per cent over 1910.

The total operating expenses of the interurban line for the year ended June 30, 1910, showed an increase of 7.6 per cent over the preceding year. They were slightly smaller in the 1911 fiscal year than in the 1910 fiscal year. The result of this reduction in operating expenses was that, notwithstanding the large increase in taxes, the total of operating expenses on the interurban line and taxes in 1911 was a trifle under the corresponding expenditures for the fiscal year 1910.

The principal traffic results of the company for the three fiscal years are shown in Table IV. As these figures indicate, there was an increase of 77,010, or 9.9 per cent, in the total number of interurban revenue passengers carried in the 1910 fiscal year as compared with the 1909 fiscal year. In 1911 there was a decrease of 10 per cent in the total number of interurban revenue passengers carried as compared with 1910. The 1911 total was a little less than the 1909 figure. A small decrease was shown in the average passenger revenue per revenue passenger on the interurban line in 1910 as compared with 1909. There was, however, a large increase in 1911 as compared with both 1909 and 1910.

The interurban pasenger car miles run increased 8.6 per cent in the 1910 fiscal year as compared with 1909, but there was a decrease of 0.6 per cent in 1911 as compared with 1910. The average gross earnings per revenue car mile on the interurban line increased from 27.8 cents in 1909 to 30.2 cents in 1910 and to 33.1 cents in 1911. This increase was at the rate of 8.6 per cent in 1910 as compared with 1909 and 9.6 per cent in 1911 as compared with 1910. The total of interurban car hours was increased to a comparatively small extent in 1910 as compared with 1909, or 3.5 per cent, but in the fiscal year 1911 the total showed a decrease of 12.6 from the fiscal year ended June 30, 1910. The effect of these figures is seen in the larger gross earnings per passenger revenue car hour which have been realized in the successive years on the interurban line. The average gross revenue per revenue car hour was $6.02 in 1910, an increase of 83 cents, or 15.9 per cent, over 1909. There was a still greater increase in 1911 as compared with 1910. In the last fiscal year the average car hour revenue was $7.67, an increase of $1.65, or 27.4 per cent, over the preceding year.

INDIANA BLOCK SIGNAL COMMITTEE MAKES REPORT

A conference was held in Indianapolis Feb. 13 between the State Railroad Commission and the special committee of interurban railway officials appointed a year ago to investigate and when possible try out the various types of interurban block signals for installation in the State. W. J. Wood, chairman of the commission, presided. The report of the special committee, which consisted of Arthur W. Brady, Indiana Union Traction; Charles L. Henry, Indianapolis & Cincinnati Traction; R. I. Todd, Terre Haute, Indianapolis & Eastern; C. D. Emmons, Chicago, South Bend & Northern Indiana; W. G. Irwin, Indianapolis, Columbus & Southern, and C. N. Wilcoxon, Chicago, Lake Shore & South Bend Railway, was presented by Mr. Brady.

Mr. Brady said that with the assistance of Mr. Hovey, an expert in the employ of the railroad commission, the committee had examined every known signal device thought to be applicable to interurban roads and that the Indiana Union Traction Company had contracted for the equipment of 18 miles, and the Terre Haute, Indianapolis & Eastern for 15 miles, with the General Railway Signal Company's continuous track circuit system. In this system, Mr. Brady explained, colored lights automatically operated are used for signals instead of semaphores. These lights are arrestive at 1500 ft. The cost of this system is from $850 to $1,000 a mile, and it will require about four months for installation. Mr. Henry supplemented the report by stating that his company was installing 18 miles of the Simmons block signal system and that he hoped to have it in operation by April 1. This system will cost about $750 a mile. Mr. Henry expressed confidence that the system would prove satisfactory. Mr. Wilcoxon described the signal system on his line.

After consulting with his associates, Chairman Wood said that the commission would not announce any decision until July 1, when these three systems would be in operation and they would be inspected by the commission. He also announced that only one broken rail had occurred on interurban electric railways during the past year and that was caused by a heavy locomotive in construction work.

Chicago the Convention City

The 1912 Convention Will Be Held Oct. 7-11—The Exhibits Will Be Shown at Dexter Pavilion, Corner Forty-Third and Halsted Streets

Secretary Donecker has just issued an announcement that the 1912 convention of the American Electric Railway Association will be held in Chicago on Monday, Tuesday, Wednesday, Thursday and Friday, Oct. 7, 8, 9, 10 and 11. The bulletin containing this announcement was issued Feb. 23. Continuing it says:

"The decision now announced was reached after a thorough study of the whole situation by a committee on convention location authorized at the recent meeting of the executive committee and consisting of President Thomas N. McCarter, Fourth Vice-President C. L. Henry and the secretary, with the assistance of a similar committee from our allied Manufacturers' Association, as follows: W. L. Conwell, president; C. S. Hawley, A. H. Sisson, Edwin H. Baker and James H. McGraw, vice-presidents; H. C. Evans and George Keegan, secretary. The committee personally inspected the facilities available in the cities of Milwaukee and Chicago and, in addition, has given due consideration to the cordial invitations extended to the association by the cities of Los Angeles, Chattanooga, Buffalo, New York and Atlantic City.

"While the comfort and convenience of our members in the matter of hotel accommodations, provisions for proper meeting halls and availability of adequate and satisfactory exhibit space must always be prime factors governing the selection of our convention cities, the location of the annual meeting place as related to the geographical distribution of the company membership is another and no less important item. Your committee, therefore, considered first this question of geography and quickly decided that proper regard for the proportionately large membership located west of the Alleghany Mountains, coupled with the fact that the last two conventions have been held on the Eastern seacoast, demanded a Middle West convention in 1912. The next step was the question of facilities, with the conclusion that in the Middle Western section the city of Chicago alone affords at this time ample and satisfactory accommodations of all kinds.

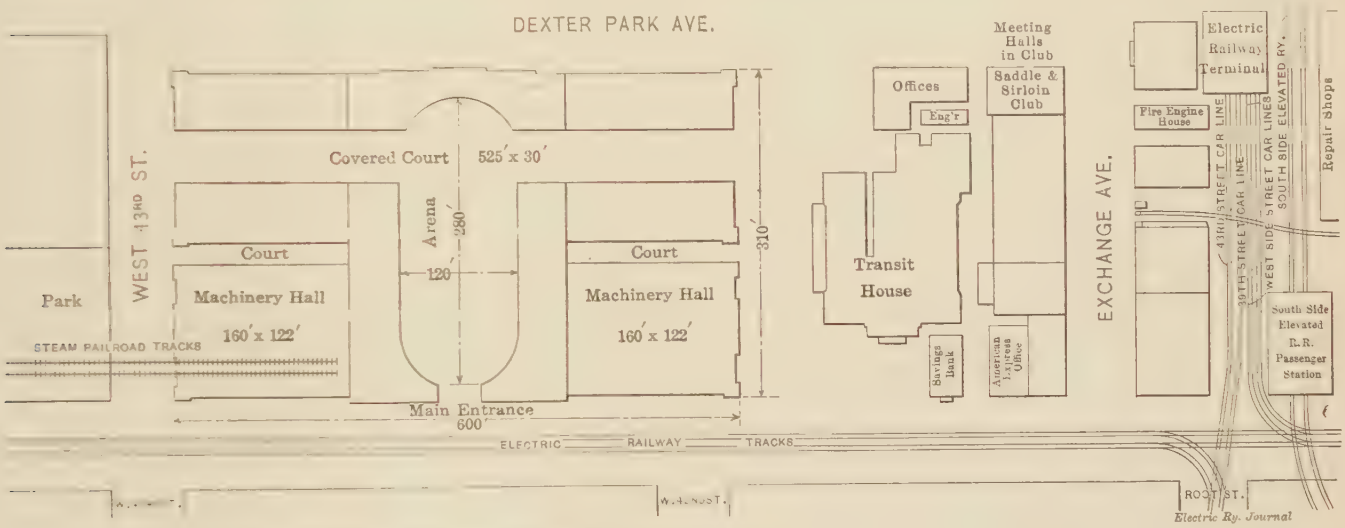
"The action of the committee will, without doubt, meet with the hearty indorsement of the whole membership. Thirteen years have elapsed since your association last met in Chicago, and the members are more or less familiar with the great changes that have taken place in that time. The rehabilitation of the lines, the consolidations affected and an opportunity to observe actual operation under the agreement with the city are only a few of the things that will hold your interest in the convention city. The accessibility of Chicago is another point in its favor and one that will assist greatly in making for the success of this, your thirty-first annual convention.

"EXHIBIT OF THE MANUFACTURERS' ASSOCIATION

"As stated above, thoroughly adequate exhibit space is to be had at Dexter Pavilion, at Forty-third and Halsted Streets. This building is splendidly equipped for the purposes of the display that adds so much to our annual meetings. It is conveniently located, and elevated and surface lines run directly to the door. More details concerning the pavilion will be given in subsequent bulletins.

"GENERAL INFORMATION

"Further information as to meeting halls which are adjacent to Dexter Pavilion, hotels, transportation arrangements and programs will be covered in later communications. Hotel rates will form the basis of the next bulletin, which it is desired to issue early in order that our members may make reservations without delay."



Map Showing Exhibit Hall, Transit Facilities and Adjoining Buildings

FURTHER PARTICULARS

The International Amphitheater, or Dexter Pavilion, is easily accessible from the center of Chicago. Six surface lines pass directly by it and a station on the South Side Elevated Railway is within a block. The running time from the hotel district of Chicago is about twenty-five minutes by either route.

The building itself consists of an amphitheater, or arena, with several adjoining buildings which are suitable for exhibit purposes. The area which is under one roof is 600 ft. x 310 ft. The amphitheater in the center, 280 ft. x 120 ft., will probably be used for the lighter exhibits. The two adjoining halls, each about 160 ft. x 122 ft. and marked "Machinery Hall," are very suitable for the heavier exhibits. These with the amphitheater will supply over 70,000 sq. ft. of exhibit space. Room in the other buildings is available if necessary, and there is ample space for the storage of crates and boxes.

A railroad track runs directly into the south annex, or Machinery Hall, and four cars can be set and unloaded inside the building. This will enable exhibitors to have

shipments sent from any point outside of Chicago directly into the hall without an additional switching charge, thereby saving them an immense amount of trouble and the expense of hauling from the railroad station. In addition, there is about a quarter of a mile of straightaway track just outside the building which may be used for exhibiting cars. The Chicago Junction Railway, a belt line connecting with all the steam roads entering Chicago and with numerous storage tracks, is located immediately north of the Pavilion.

Directly opposite a new hotel is being erected. The old hotel on this site, the Transit House, burned about a month ago and has been torn down, and plans have been prepared for a new fireproof hotel on the old site to be opened in June or July. The Saddle & Sirloin Club, on the corner of Dexter Park Avenue and Exchange Avenue, is a fine building and contains a number of good meeting rooms for the association. Luncheons may be served here or at the hotel.

CO-OPERATIVE MEETINGS IN PHILADELPHIA

An announcement of the Philadelphia Rapid Transit Company, reprinted in the Electric Railway Journal for Sept. 2, 1911, outlined a plan for a co-operative committee composed of representatives from the trainmen and the management to consider questions of service and discipline. This co-operative committee has since been organized with T. E. Mitten, chairman of the board of directors of the company, as chairman of the committee, and meetings were held on Jan. 16, Jan. 23, Jan. 30 and Feb. 8, 1912. From these meetings it appears that the company will now enter into an agreement with the men only as individuals and not as an organization. The company has recently published a bulletin to the employees describing the conclusions reached. Some of them are briefly as follows:

Complaint was made that the penalty for missing a run was unnecessarily severe and was not enforced uniformly at all depots. Chairman Mitten explained that he did not believe it necessary to make the penalty more severe than was found by experience necessary for the maintenance of proper discipline. The rule was then changed so that if a man reported for duty within one hour after the time due for him to report he would serve for the rest of the day at the foot of the extra list. Where he reported after a period longer than one hour, he would go to the foot of the extra list for two days.

A change was made in regard to the discipline for incivility. The former rule has been modified so that the motorman or conductor need not make personal apology.

All bell ropes will now be run through the center of the car and will be equipped with extension pulls. This change was made because the former location of the bell rope at the side was inconvenient to conductors and passengers.

Formerly wages were paid on the 7th, 14th, 21st and last day of the month. This left one interval of nine or ten days and hence created some hardship. After the week ending March 10 conductors will be paid every Thursday and motormen every Friday for the pay period ending on the preceding Sunday. This will enable the families of the men to take advantage of the Saturday morning markets.

Regular men have found it difficult at certain stations to secure leave of absence during the ends of pay periods. The reason given was that the clerks at the stations made up their books the day before and were unwilling to let off all men who applied on the morning of the last day of the pay period. The result was that extra men remained on the bench practically all day. Instructions have now been issued that men should be let off then as at other times.

Hereafter surface car employees in full uniform with badge will be permitted to ride free on the elevated line. Up to Feb. 10 this was not permitted, although elevated badges were good for transportation on the surface cars.

The use of uniformed inspectors to insure the proper registration of fares was not productive of good will and their use has been discontinued.

An extension has been made in the rule in regard to extension of sick leave beyond sixty days. Trainmen whose sickness extends longer than sixty days are now allowed to make application to their division superintendent for medical examination, and upon the recommendation of the company's physician sick leave will be extended for recurrent periods of sixty days each.

The wages of trainmen employed as helpers on sand cars have been increased from 19 cents per hour to the rate which they would earn as trainmen.

PERSONAL TAX TITLES AS AFFECTING BANKRUPT SALES

A personal tax title case in which the Illinois Traction Company was made the defendant was recently decided in a jury trial held at Lacon, Ill. On Oct. 15, 1910, the Illinois Traction Company purchased a steel bridge from the Develin estate, bankrupt, for $10,000. It consisted of three 150-ft. Pratt truss spans and one 350-ft. draw span and weighed approximately 700 tons. The bridge had been purchased by the estate about five years before to be used on a projected steam road for spanning the Illinois River at Henry, Ill. Before the road was completed, however, the estate was thrown into bankruptcy and the bridge has been held in storage since that time on the right-of-way of the projected road near Henry Junction. The Illinois Traction Company had its purchase approved in the bankruptcy court and secured the necessary documents to make it legal. As the tonnage was large and there was no immediate need of any of the spans, the traction company arranged with the Chicago & Alton Railroad Company, the purchaser of the rights of the proposed Develin road, to leave the bridge where it was until the following spring.

The bridge had been assessed for personal taxes during the April previous to the traction company's purchase, and the tax books were turned over to the tax collector on Dec. 31, 1910. It is assumed that the tax collector or the party who bought the tax title to the bridge at public auction heard of its transfer to the traction company and thought that there was an excellent opportunity to make some money by selling it to the traction company a second time. Under these apparently favorable circumstances the bridge was sold for personal taxes and the purchaser immediately began negotiations for selling it back to the traction company. The company advised him that his title was void and at once arranged to load the spans and ship them to its own storeyard at Decatur, Ill. In the meantime, however, the gentleman who held the tax title was busy with a traction engine moving what he assumed to be his property onto his land. The traction company soon put a stop to this with a large force of men and pulled those portions of the bridge which the claimant had removed back to the original location. Then the sheriff appeared and served papers for trespass and trover, but did not interfere with the company's loading the bridge and shipping it to its Decatur storeyard.

The question at issue in the case was not one of the legality of the tax title, but one of possession. The law holds that taxes on personal property are not a lien on the property assessed, but on the property owned when the taxes are collectible, and as stated the tax books were not turned over to the tax collector until Dec. 31, 1910, following the traction company's purchase. This condition made the personal property taxes assessed against the bridge collectible only from the Develin estate, the owner at the time the bridge was assessed. The legality of the purchase was not questioned, but the fact that the sale was not announced publicly resulted in a verdict of $487.50 against the Illinois Traction Company.

FORT SMITH EMERGENCY CAR

The accompanying cuts present an exterior and an interior view of an emergency car which was designed and built by the Fort Smith (Ark.) Light & Traction Company. It has been particularly valuable in handling "wrecks," since a car can now be replaced and traffic restored in the same time that the men formerly required to get their equipment ready to leave the shop. One day a car became derailed about 11:15 a. m. It was 2 miles from the shop and in such a position as to block three lines. With the old system this car would have been off the track at least one hour, and three lines would have been blocked during the noon rush. As it was, the car was on the track in just thirty minutes from the time that the telephone rang at the shop.

Emergency Car of Fort Smith Light & Traction Company

This car also won some friends for the company as an ambulance car in an accident which occurred at the ball park on July 4, 1911. As an addition to the fire department it has no record except in extinguishing burning ties.

The car body is built with a plain arch roof and a sliding door on each side. The bottom framing is unusually heavy for a car of this size, and it is strongly built and well braced throughout. It is equipped with a Brill No. 21-E truck having an 8-ft. wheelbase. The truck carries two Westinghouse 38-B motors geared 3.55:1 to give a speed of about 40 m.p.h. The rest of the electrical equipment consists of arc headlights, heaters and designation lights. The markers and tail lights are oil burners of the standard railway type.

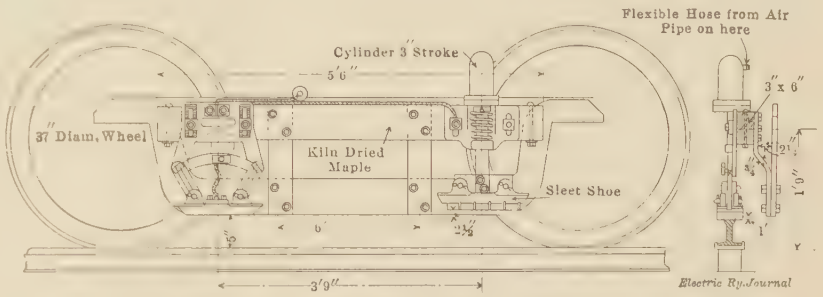
Interior of Fort Smith Emergency Car

The equipment carried is about as complete as the space in the car will permit and consists of a complete outfit of wrecking tools, jacks, frogs, chains, plates, blocks, ropes, etc. About 2 cu. yd. of dry sand is kept in bins located in diagonally opposite corners of the car and a Root snow scraper is provided on each end. The fire-fighting equipment consists of six 3-gal. extinguishers and an extra supply of chemicals for reloading them. Two very elaborate accident cabinets and four folding cots complete the first-aid equipment of the car.

While the company's motor flat car was being repaired this emergency car handled the carload freight business in a very satisfactory manner.

PNEUMATIC SLEET SHOE USED BY MICHIGAN UNITED RAILWAYS

The Michigan United Railways system includes high-speed third-rail lines connecting Battle Creek, Jackson, Lansing and Owosso and other lines operated by overhead trolley, forming a system with more than 225 miles of track. The third-rail is of the open type, and current is collected by shoes riding on the top of a standard section T-rail, which is carried on vitrified clay insulators. The center of the third-rail is 20 in. from the center of the nearest running rail, and its upper surface is 6 in. above the top of the running rails. This road and several other cross-country interurban lines using the open type of third-rail have experienced difficulty in collecting current when the rail becomes coated with sleet. This problem has been solved to the satisfaction of the management of the Michigan United Railways by the use of a pneumatically operated sleet-cutting shoe designed by W. Silvus, superintendent of equipment, Albion, Mich. The general features of design of the shoe and its method of attachment are shown in the accompanying illustration, which is a plan and elevation of the shoe on the truck.



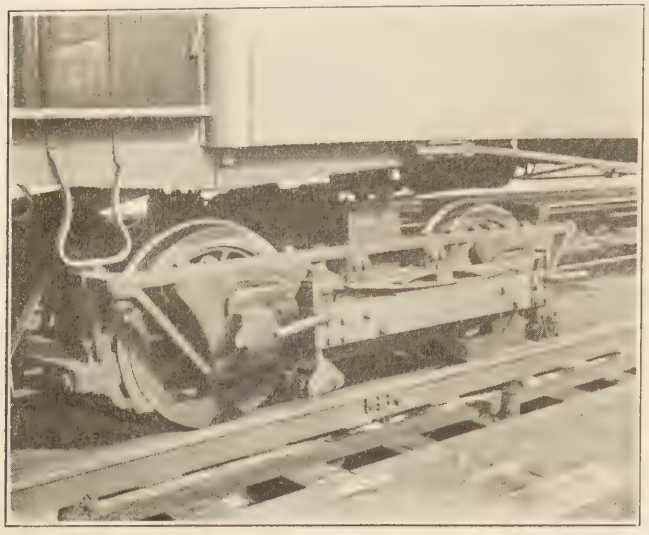
Sleet Shoe, Michigan United Railway

Each car is equipped with two of the pneumatically operated shoes attached to the front end of the third-rail beams on the front truck. The interurban cars of the Michigan United Railways are single-ended. The sleet-cutting shoe is of the same design as the regular third-rail shoe, but has four steel cutters set diagonally in its face and cast integral with the body of the shoe. When these cutting edges become worn or damaged they are chipped off, and the shoe is kept in regular service until it is worn out.

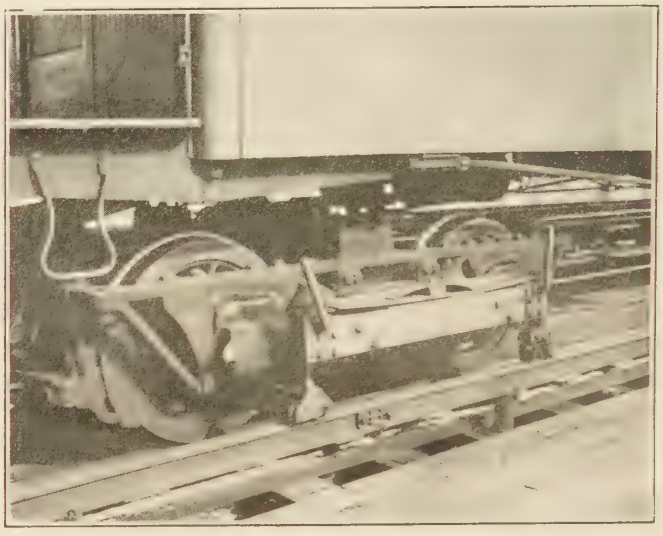
The sleet-cutting shoe is mounted on a vertical iron shaft which passes through guides and is attached to the piston of an air cylinder which has a 5-in. stroke. A spiral spring around this shaft holds the shoe off the rail except when air pressure is put on the cylinder to press the cutters against the rail. The air supply is taken from the train line through a ⅜-in. three-way valve and pipes extending under the car to a point convenient for connecting with the cylinder which operates the shoe. This connection between the pipes and the cylinder is made with a 2½-ft. length of ⅜-in. air hose, secured at each end with hose clamps. An ordinary straight valve is placed in each supply pipe to enable the motorman to use one or both shoes as occasion demands.

A SLEET-REMOVING DEVICE FOR EXPOSED THIRD RAILS

For a number of years the operating and mechanical departments of the Metropolitan West Side Elevated Railroad Company have been trying to secure a third-rail sleet-cutting device that would efficiently do the work for which it was intended. They have experienced very little trouble in securing a device that would remove sleet in extremely cold weather, but to get one that would do the work well at the time the sleet is falling and when the ice is to a certain extent tough and resilient and adheres to the rail seemed to be impossible. After testing a great many types, both purchased and of their own design, they developed the sleet remover shown in the illustration and this was found to give best satisfaction under all operating and weather conditions.



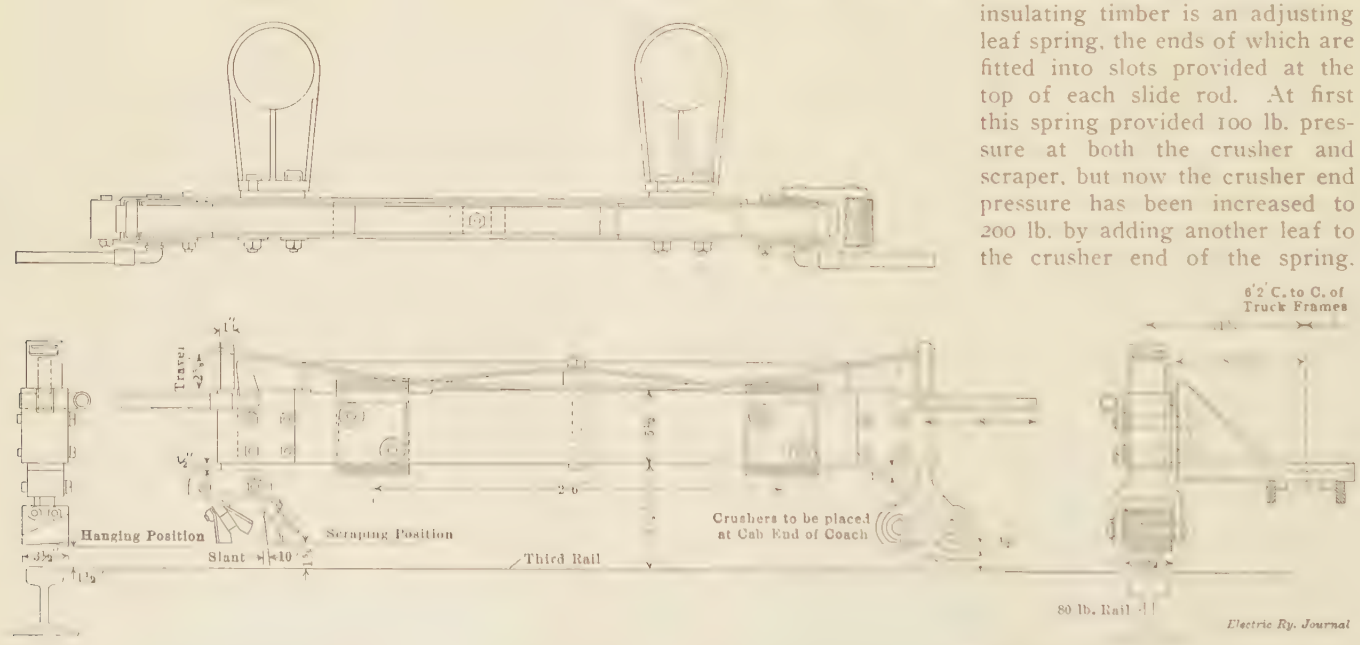
Sleet Remover in Elevated Position



Sleet Remover in Working Position

The device as shown consists of a piece of oak 2⅝ in. x 5½ in. x 4 ft. 1¾ in., at one end of which the crusher rolls are placed and at the other end are the scrapers. The crushing rolls, 3¼ in. x 3½ in. in size, are right and left spiral-toothed, made of cast crucible steel, hardened, but not machined. These rollers are carried on 1-in. x 6-in. steel pins, which are held in place in the steel slide-rod casting by cotter pins at each end. At each end of the oak board is a cast-iron cam and wooden handle, which is used in raising or lowering the rollers or scrapers from or to the working position.

The scraper blades are ¼ in. x 3¾ in. x 2⅜ in. and are made of tool steel. There are four of these blades bolted to cast-steel pivots so that they may take the scraping position for either a backward or forward movement of the car. The scrapers are supported on a slide rod provided with the elevating cam similar to the crushers. Immediately inside the guide plates which support the crusher and scraper slide rods are two-cast-iron corrugated plates which are used in adjusting the sleet remover for different truck heights and wheel wear. Bolted to the top of the oak insulating timber is an adjusting leaf spring, the ends of which are fitted into slots provided at the top of each slide rod. At first this spring provided 100 lb. pressure at both the crusher and scraper, but now the crusher end pressure has been increased to 200 lb. by adding another leaf to the crusher end of the spring.



Plan and Elevation of Sleet-Removing Device, Metropolitan West Side Railway

This sleet-removing device may be either bolted to the third-rail shoe beam or held in position as shown on the plan by means of a casting which is fitted to the car spring seats. A ½-in. flashboard made of ash and running the full length of the sleet remover has been inserted between adjusting plates and the oak timber to provide additional insulation.

Up to the present time only sixteen cars on the Douglas Park division of the Metropolitan line have been equipped with these new sleet removers. A recent test during a

severe sleet storm, however, demonstrated the efficiency of this device. As mentioned before, the parts of the device are simple and are all made in the Metropolitan shops. They can be applied to the car spring seat for about $14 each, and if applied to the third-rail shoe beam the cost is reduced to about $9. The life of the device is practically unlimited and requires only the renewing of the scraper blades and crusher rolls from time to time. The elimination of delays on account of sleet and the small initial cost make an efficient sleet remover desirable. This one seems to have both these qualities, and it should pay for itself many times over during one severe sleet storm.

PROPOSED CAR FOR SAN FRANCISCO

The accompanying drawing shows a new type of car suggested for the Geary Street, Park & Ocean Railway by B. J. Arnold. The Geary Street line is a municipally owned road, and the recommendations about the car are in the form of a report submitted by Mr. Arnold under date of Feb. 7 to the Board of Supervisors. They are referred to in the report as being preliminary and some details may be changed before the final specifications are issued.

TYPE

The car is of the California type, generally used in San Francisco, with closed center and open ends, and it is designed for double-end, pay-as-you-enter operation. It has a seating capacity of forty-four and standing area, excluding platforms, of 90 sq. ft. It is 47 ft. 1 in. over all.

ADVANTAGES

The advantages of the car as stated by Mr. Arnold may be summarized briefly as follows:

(1) The use of partly closed and partly open body, with closed part in the middle.

(2) The substitution of raised sash for drop sash in the closed portion, thus permitting a lighter and narrower construction.

(3) The elimination of glass windows in the open parts, leaving only drop curtains and thus saving expense and weight.

(4) The use of an arch roof.

(5) Automatic exhaust ventilators in the closed portion.

(6) The rearrangement of operating apparatus on the platforms and changes in the design of guide rails so as to increase the reservoir capacity of the plaforms. This change places the motorman at the side of the platform, where he can better watch the front exit.

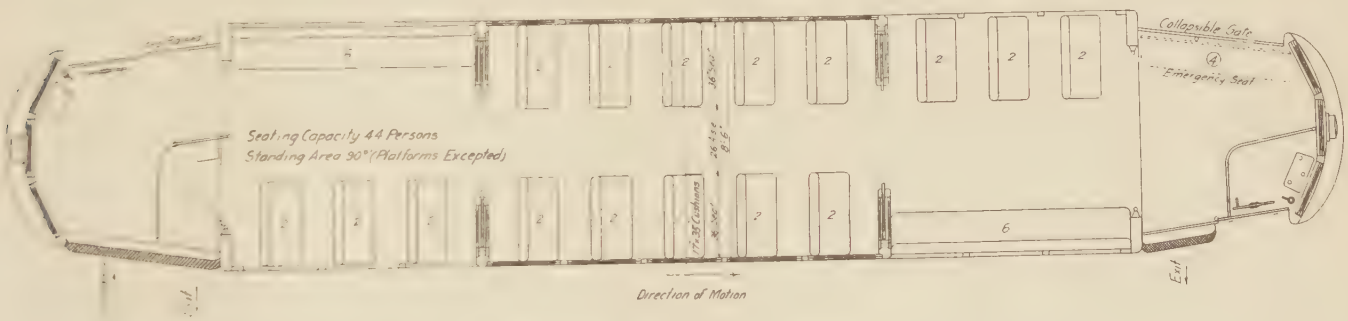
(7) The use of cross seats in the open portions of the car.

(8) The use of open bulkheads.

(9) The use of a hinged guard rail so arranged as to permit the entire width of entrance of the rear platform to be used for loading at times of excessive congestion.

(10) The adaptation of the car for steel, semi-steel or all-wood construction.

The report adds that some of these designs involve patented construction, such as the pay-as-you-enter feature and the lift-sash device, but the latter might be eliminated if the width of the car should be increased 3 in.



Proposed Car for San Francisco

A RAILWAY'S SHARE OF HIGHWAY BRIDGE RENEWAL COST

A recent decision of the Railroad Commission of Wisconsin in the matter of the investigation of the safety of the West Algoma Street bridge in Oshkosh is of marked interest in that it establishes a precedent for dividing the cost of construction of a new highway bridge equitably, not equally, between a city and an electric railway company. Heretofore negotiations between a city and an electric railway relative to the division of the burden of cost for building or renewing a jointly used highway bridge have generally started with the hypothesis that each party should bear one-half of the expense. In this case, however, the Railway Commission, in an exceedingly clear report, has decided that, from the standpoint of equity, the railroad should carry only 7 per cent of the expense.

The case in question arose from a petition to the commission, signed by a number of patrons of the Wisconsin Electric Railway Company, to the effect that the existing bridge over the Fox River at West Algoma Street in the city of Oshkosh was unsafe for railroad traffic and should be reconstructed or repaired. The commission, after a thorough examination, agreed with the petitioners' contention and decided that public interests would be best served by the erection of a new and modern bridge, rather than by an attempt to repair or renew the existing structure. In considering the proper width for the new bridge it was decided that, if it was not to be used by the electric railroad, the bridge roadway would be made 22 ft. wide with a 6-ft. walkway on each side. This dimension was recommended by the city engineer and was approved by the commission for the reason that it would permit traffic in both directions to be continued when anything of unusual width, such as a load of hay, was on the bridge. Under ordinary conditions this might not be considered a serious matter, but the bridge in question was 680 ft. long, and if it was only 16 ft. or 18 ft. wide the crossing of a load of hay would hold up traffic in the contrary direction for three minutes, to say nothing of the confusion which would follow.

The presence of electric railway tracks was found to necessitate an increase in the width of the roadway to 24 ft. 6 in. This figure was based upon double tracks, cars 9 ft. wide, 30 in. clear between cars, and 24 in. clear outside of each car, or between the car body and the bridge truss. The use of double tracks, permitting the cars to move with the body of traffic passing over the bridge in each direction, was found to require no more width than was needed for a single track, and this obviated any possibility of confusion during the passage of an extraordinarily wide load. It was therefore decided that, since the presence of the electric railroad's tracks would involve an increase in the width of the bridge of 2½ ft., the railroad should bear 2.5/36.5, or 7 per cent, of the cost of the new bridge. The total necessary width determined by the commission, 36.5 ft., included two 6-ft. walkways, in addition to the 24½ ft. of roadway, and it is admitted that the increase in cost

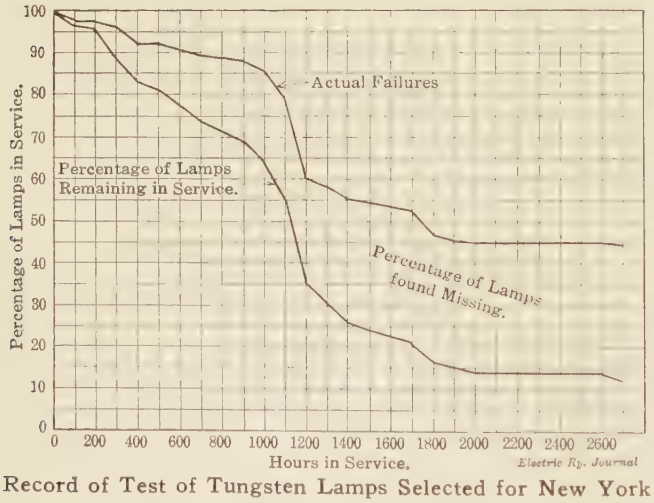
due to widening the bridge roadway is not directly proportional to the increase in the total width. However, it is undoubtedly true that the figure is approximately correct.

Summing up the matter of the division of the cost of the new bridge, the commission states that, while there is no absolutely accurate method of determining it, the share of the cost which can be justly apportioned to the railroad company lies somewhere between the upper limit of 50 per cent, such as might result from a situation where both parties contemplated building separate structures, but for the sake of economy agreed to the joint use of one bridge, and the lower limit of practically nothing where the laying of tracks over an existing bridge required no widening or reinforcement of the structure.

LAMP TESTS OF THE INTERBOROUGH RAPID TRANSIT COMPANY

During the summer of 1911 the Interborough Rapid Transit Company conducted exhaustive durability tests of several types of high-efficiency incandescent lamps. As the result of these tests it has equipped the 780 cars used in the subway express service with wire-drawn-type tungsten lamps.

For the purposes of the test 100 lamps of each of five types were purchased and installed on cars selected for the test but operated in the regular service. The types of lamps tested were the metallized carbon filament, the tantalum filament and the wire-drawn tungsten. Each of the lamp sockets in the test cars was numbered, and all test lamps were labeled when installed with the number of the socket and car and the date when put in. The lamps were inspected every day and all burned-out or broken lamps were carefully recorded before being renewed. From a study of the schedules and observations of the running time on open track during the daylight hours the daily average time during which current was on in the lamps was estimated at eleven hours, and the life of the lamps was computed on this basis. The renewals were divided


Percentage of Lamps in Service.
Actual Failures
Percentage of Lamps Remaining in Service.
Percentage of Lamps found Missing.
Hours in Service.
Electric Ry. Journal

Record of Test of Tungsten Lamps Selected for New York Subway

into two general classes, lamps burned out or otherwise defective and lamps accidentally broken or entirely missing. The comparative life of the test lamps was calculated on the basis of the percentage of lamps still in service at the end of each 100 hours of burning. The ordinary rigid sockets with which the test cars were originally equipped were used for all test lamps.

The tantalum lamps failed rapidly from the time they were first installed, as the filaments were quickly broken by the vibration. A similar result was obtained with the metallized carbon filament lamps.

The tungsten filament lamps gave the best results, the life of the make finally selected being shown by the accompanying curve. As will be seen from this curve, a few lamps with poor filaments failed very quickly after they were put in, but about 65 per cent had a life of 1000 hours or longer. The failures increased rapidly after 1000 hours, but at the end of 2700 hours 12 per cent of the lamps were still in good serviceable condition.

When the tests had been continued far enough to permit of a fair comparison of the different types of lamps it was decided to adopt the tungsten lamps for the 780 subway express train cars. The installation of these lamps was commenced about Sept. 1, 1911, and they have now been in service over four months.

The tungsten lamps cost approximately three times as much as carbon filament lamps. On the other hand the company is providing its patrons with much greater illumination in the express train cars than was the case with the carbon lamps.

FOG-TRIP ORDER ON CHICAGO ELEVATED RAILWAYS

On Jan. 15, 1912, the elevated railways of Chicago inaugurated a new system for issuing fog orders. It has been the custom of this company to require the dispatchers to transmit verbal instructions to each trainman as he leaves the terminal. This method has not proved as satisfactory to the management as was anticipated. One reason was the failure of the verbal order to produce a lasting effect

SOUTH SIDE ELEVATED RAILROAD COMPANY.

FOG—TRIP ORDER Order No. 16

Mr. J. H. Brown Motorman. Jan 15 1912

This order is to notify you that a heavy fog has settled at various points along the line of road, and you are hereby ordered to disregard schedules and feel your way slowly over any part of the line of road where fog has settled, and at all times be sure you are running your train at such a speed that you can stop within the distance you can see.

A VIOLATION OF THIS ORDER MEANS INSTANT DISMISSAL

Issued at Jackson Pk Time 6:46 A.M.

Signed, H. W. Johnson Motorman. J. H. Williams Despatcher.

THIS ORDER TO BE RETURNED BY MOTORMAN TO DESPATCHER WITH TIME SLIP

Fog Order Issued by South Side Elevated Railway, Chicago

on the trainman. The verbal orders were given out systematically, but there was no method of having an absolute check on them.

The new method is as follows: The train dispatchers, who are located at different points along the line, report the apearance of a fog to their respective trainmasters at one of the terminals. The trainmaster then instructs the dispatchers located at the terminals to issue the fog-trip order, reproduced herewith, to each motorman. The order shows the name of the motorman to whom it is issued, the dispatcher's signature and the place and exact time of transmittal. It is effective only for one round trip and must be turned in properly signed by the motorman at the end of a trip and another issued, if necessary.

An order board has been provided in the motorman's cab, where it may be easily seen at all times. Originally, this board carried only a general list of instructions and warnings. The new type of order is attached to this board, where it will act as a constant reminder of the presence of the fog. The order, which was originated by M. J. Feron, general superintendent of transportation, is somewhat like the ordinary train order used on an interurban road, in that it is permissive. The motorman is allowed to disregard the schedule, as he may use his own judgment as to a safe speed.

A bulletin was issued with the fog-trip order advising the trainmen that they were not to be governed solely by the presence of the dispatcher's order, and that they would not be relieved of any responsibility because the order was in force whenever their view should happen to be obstructed in any way.

DECISION UPON QUESTIONS REGARDING THE INTERSTATE COMMERCE COMMISSION CLASSIFICATION OF ACCOUNTS

Accounting Bulletin No. 7, issued by the Interstate Commerce Commission, gives answers to various questions bearing upon the interpretation of the classification of accounts for electric railways prescribed by the Interstate Commerce Commission as of Jan. 1, 1909. The decisions which are published in the report became effective on Jan. 1, 1912.

Charles A. Lutz, chief examiner of accounts of the commission, in an introductory letter says that the cases in Accounting Bulletin No. 5 are repeated in Bulletin No. 7 and a few are in amended form. The later bulletin therefore supersedes Bulletin No. 5. A file of important cases relating to the classifications that were approved for publication before Dec. 1, 1911, is included. Mr. Lutz states that the answers given in the bulletin were submitted to the committee on a standard classification of accounts of the American Electric Railway Accountants' Association and with but few exceptions received the approval of that committee.

The questions and answers in a few of the cases are published below:

CASE 189

"*Query.* To what account should be credited the net receipts from the operation of a park or amusement resort, after deducting all the expenses? During a portion of the year the expenses would probably exceed the receipts, but during the summer season the receipts might exceed the expenses, and to show a credit balance in operating expense account No. 46, 'advertising,' would not appear desirable.

"*Answer.* If the park or amusement resort is operated primarily for the purpose of attracting traffic, and not as an investment, the proper account to credit is account No. 19, 'miscellaneous,' in the classification of operating revenues of electric railways. The income from and the expense of conducting such a park or amusement resort may be carried in a suspense account until the close of the season. When this method is followed the estimated net profit or net expense should be equitably apportioned among the months during which the park or amusement resort is open to the public, and an adjustment of the suspense account made at the close of the season.

CASE 211

"*Query.* Account No. 34 in the classification of expenditures for road and equipment of electric railways provides for the cost of road purchased. To what account or accounts should be charged expenditures in connection with the reconstruction of a road purchased, involving a general overhauling of track and electric line construction, stations, platforms, etc., to bring the physical condition of the road to a proper standard of efficiency and safety?

"*Answer.* The net cost of expenditures in connection with the reconstruction of a road purchased should be distributed among the various accounts in the classification of expenditures for road and equipment of electric railways. It is not intended that such expenditures should be charged to account No. 34, 'cost of road purchased.'

CASE 215

"*Query.* What rates of depreciation should be applied to the different portions of an electric railway's plant? Should the principle of depreciation be applied in the case of each of the forty-four classes of construction covered by the accounts prescribed in the classification of expenditures for road and equipment of electric railways?

"*Answer.* Provision is made in the classification of operating expenses of electric railways for two depreciation accounts, viz., account No. 26, 'depreciation of way and structures,' and account No. 42, 'depreciation of equipment'; but the Interstate Commerce Commission does not require any electric railway company to keep these accounts unless they are prescribed by the Railway Commission of the state in which such company operates the major portion of its mileage.

"The question of the rates of depreciation is one which each carrier must determine for itself, and the Interstate Commerce Commission has issued no order fixing such rates.

CASE 219

"*Query.* What disposition should be made in a lessee company's accounts of expenditures for betterments of the road and equipment of lessor companies made in accordance with the terms of the leases, there being no provision for reimbursement of the lessee for expenditures so made?

"*Answer.* Expenditures for additions and betterments of the property of leased companies should not be included in the lessee's road and equipment accounts, but should be carried on its books as 'additions and betterments of leased lines,' being subdivided into the forty-four accounts prescribed in the classification of expenditures for road and equipment of electric railways. If there is no provision for reimbursement on account of such expenditures, they should be amortized during the term of the lease through charges to 'rents of leased lines.'

CASE 222

"*Query.* What account should be charged with the amount assessed against a street railway for paving and a sewer? The work is done for the city by contract, so that the actual cost can not be determined for either the paving or the sewer.

"*Answer.* The amount of the assessment should be apportioned as equitably as may be between account No. 10, 'paving,' and account No. 2, 'right-of-way,' in the classification of expenditures for road and equipment of electric railways.

CASE 224

"*Query.* As a condition to permission to place double tracks in certain subways constructed in the elevation of the tracks of steam roads, an electric railway was required to change the grade on a street in another part of the city. Should the cost of the work on the city street, such as the changing of the grade, curbing, etc., be charged to account No. 2, 'right-of-way,' in the classification of expenditures for road and equipment of electric railways?

"*Answer.* Yes.

CASE 250

"*Query.* A practically new car, carried under equipment in expenditures for road and equipment, was destroyed in a wreck, the salvage amounting to a few hundred dollars. What disposition should be made of the loss and the salvage?

"*Answer.* The accounts under expenditures for road and equipment, to which the cost of the car was originally charged, should be credited with the cost of the equipment destroyed, and this cost, less salvage, should be charged to the appropriate operating expense accounts.

CASE 251

"*Query.* A city proposes to repave its streets with improved materials, and the street railway company is required by the terms of its franchise to repave its strip at the same time and with the same kind of material. Would it be proper to charge the cost of the new paving to account No. 10, 'paving,' in the classification of expenditures for road and equipment of electric railways?

"*Answer.* The excess cost of the new paving over the cost of the original paving should be charged to road and equipment account No. 10, 'paving,' and the remainder to operating expense account No. 9, 'paving.'"

The City Council of Los Angeles, Cal., on Jan. 9, 1912, deferred action one week on the proposed ordinance giving the Board of Public Utilities the power to regulate street car fares.

WRECK IN THE HOOSAC TUNNEL

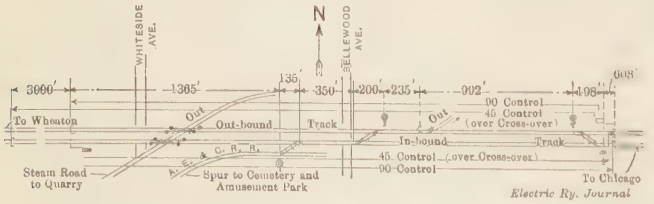
On Feb. 20 there was a collision in the electrified Hoosac Tunnel on the Fitchburg division of the Boston & Maine Railroad. It occurred between a Boston-bound passenger train and the uncoupled rear end of a steam freight train which was being hauled through the tunnel by an electric locomotive. The passenger train was not seriously damaged with the exception of the electric locomotive which was drawing it, but several cars of the freight train were demolished and the wreckage took fire. Four employees who were on the electric locomotive were killed. There were no other casualties. The following is the official statement of the accident as furnished by the railroad company:

"At 3:45 p. m. Tuesday, Feb. 20, extra freight No. 2633, eastbound, entered the west portal and proceeded, with electric motor hauling the steam locomotive and train, until a point about 1000 ft. from the east portal was reached, when from some unknown reason the train broke apart, leaving seventeen cars and caboose in the tunnel about 1000 ft. from the east end. The flagman, R. T. Kent, immediately went back to protect the rear end and reached a point about 6000 ft. from the caboose of the freight train. Passenger train No. 2 entered the west portal of the tunnel at 4:25 p. m., 7300 ft. from the entrance to the tunnel stopped at automatic block signal, then proceeded, picked up the flagman and stopped again at a second block signal which is located about 8000 ft. from the first, collided with the caboose on the rear of freight train about 6000 ft. east of the point where they made the third stop for signal at about 4:40 p. m. Passenger train No. 2 was being hauled by electric motor No. 5004, which, as is the custom, was hauling train and steam locomotive. Almost immediately after the collision the wreck took fire—we believe from coal stove in the caboose car. Engineer of steam locomotive on train No. 2 backed away from the wreck some six or eight train lengths and later to North Adams, where it arrived at 6:45. Engineer Simonds, Fireman Greig, Flagman Kent and a spare engineer named Davis, who were all in the motor, were probably instantly killed. No other casualties or injuries reported. The intense heat of the burning freight cars and contents (coal) has prevented full examination of the wreck.

"Investigation now under way."

AUTOMATIC BLOCK PROTECTION FOR DIVERGING ROUTES

The Aurora, Elgin & Chicago Railroad Company recently closed a contract with the General Railway Signal Company for two three-position, upper right-hand quadrant, automatic block signals of the signal company's style 2-A, mounted on a 22-ft. 6-in. mast. These two signals will be installed at Bellewood, Ill., where the railroad company has a spur to Oak Ridge Cemetery and an amusement park. This spur leaves the main line by way of the inbound track.



General Layout Showing Signal Control

The general track layout and signal control are shown on the accompanying plan.

The Aurora, Elgin & Chicago Railroad, which was described in the Electric Railway Journal of Aug. 5, Aug. 12 and Aug. 19, 1911, is a high-speed, third-rail road and operates on double track through Bellewood. Owing to the increased traffic which is being diverged over the spur, requiring Chicago outbound cars to use the cross-over between the outbound and inbound main tracks at this point, some system of protection other than written orders, caution and stop signs has become necessary. The new signal installation practically operates this section of double track, which is about 7000 ft. long, as single track and thus furnishes the necessary protection. A car entering the block on either inbound or outbound track lowers the signal blade, which protects traffic running in the opposite direction, from the clear to the caution position. The presence of a train in the block is shown to the crew of a train preparing to throw either cross-over switch or the switch to the cemetery spur by means of indicators placed at the switch points. An open switch at the spur or at the outbound cross-over brings the blade on the inbound track signal to the stop position. The signals also give rear-end protection to trains running through the block when the track is lined for double-track operation. Energy for operating both signals is furnished by 110-volt, 60-cycle alternating current supplied through a small transformer from a 2200-volt transmission line already installed.

LATELY DESIGNED TYPE OF FENDER AT BOSTON

The Boston Elevated Railway Company is equipping a considerable number of its surface cars with a comparatively new type of fender designed by the superintendent of car shops, H. L. Libby. As shown in the accompanying photograph of a prepayment semi-convertible car now standard on the company's surface lines, the fender consists of a basket or screen of 4-in. mesh, Clinton electrically welded wire fabric, the strands being 3/16 in. in diameter. The network is carried about 4½ in. above the top of the rail by 1-in. wrought-iron pipe frame. By means of a foot

New Boston Fender

lever the motorman can raise the fender to a maximum height of from 8 in. to 10 in. in order to clear high paving, street obstructions and transfer table approaches in carhouses. A feature of the framework is that it has a horizontal bend or angle at each of the front corners. This enables the fender to push off the rail any light objects which may be in front of the car. The fender is supported by a proof-coil chain ¼ in. in diameter, the links being of wrought iron. When not in use the fender can easily be raised against the dash. Its overall dimensions are 5 ft. 10 in. x 3 ft. 7 in. About two hundred cars have been equipped with the fender to date.

The Illinois Traction System will have an exhibit of its safety block signal systems at the "Made-in-Peoria" show which is to be held at the coliseum in Peoria, Ill., during March.

ELECTRIC RAILWAY LEGAL DECISIONS

CHARTERS, ORDINANCES AND FRANCHISES

California.—What Constitutes a Street Railroad.

An essential element of a street railway in the ordinary acceptance of the expression is that the road should run along and upon a street or road in such manner as not to exclude the public from such street or road as a public highway, and where a track was laid along a private right of way in such a manner as to exclude the general public from the use of any part of the strip, it was not a street railway track, nor would the fact that the rails were laid flush with the surface at a street crossing so that vehicles and passengers might cross convert the track at such point into a street car track. (Simoneau v. Pacific Electric Ry. Co., 115 Pac. Rep., 320.)

Connecticut.—Eminent Domain—Abutting Landowners—Additional Servitude.

A corporation operating a street railroad system in a highway may render itself liable to an abutting landowner if it is operating its system in and through the highway without authority from the State, or, if so authorized, if its system is so constructed and operated as to impose on the land an additional servitude.

Where a street railway company operated its line in the street adjacent to plaintiff's residence with reasonable care, the fact that plaintiff suffered inconvenience from noise and dust, that the company operated a large number of cars early in the morning and late at night, sometimes crowded with people, some of which were express cars which only stopped at stated points somewhere distantly removed from each other, and also operated at different times work cars carrying construction and building material and gangs of workmen, and that often defective cars were run over the track which were unnecessarily noisy by reason of the defects, all of which annoyed and disturbed plaintiff and others residing along the line, was insufficient to constitute actionable injury. (Caldwell v. Connecticut Ry. & Lighting Co. et al., 80 Atl. Rep., 285.)

Illinois.—Grant of Right-of-Way—Conditions Subsequent—Breach—Forfeiture.

A deed to a railway right-of-way provided that if the grantee should fail to construct and continuously operate the proposed railway within two years between two points on its line the land conveyed should revert to the grantors, the object of the stipulation being to secure the construction of the road and prevent the use of the land for other purposes. The road cost $1,000,000, and by far the greater portion of it had been expended and substantially all the work, except overhead construction, completed before the termination of the two-year period. The failure to complete the work was caused by delay in procuring materials and not by the negligence or indifference of the grantees. Notice of forfeiture was not given by the grantors until about a month and a half after expiration of the two-year period, and between those dates a large amount of work was done and a large sum of money was expended in the completion of the work on the land granted, with knowledge of the grantors. The work was completed about three months after the termination of the period stipulated, and trains over the line were operated continuously as contemplated, so that the purpose for which the land was conveyed was accomplished substantially in accordance with the conveyance. Held, that a forfeiture would be inequitable and will not be enforced in equity. The remedy was an action for damages for breach of covenant. (Springfield & N. E. Traction Co. v. Warrick et al., 94 N. E. Rep., 933.)

New York.—Transfers—Punching Transfers.

Defendant interurban street car company contracted with a local company for mutual transfer privileges within the city limits, subject to the regulations contained in the transfers. Defendant's rules forbade the acceptance of a transfer unless the hour was properly punched thereon and a transfer slip received by a passenger from the local company stated thereon that it was void fifteen minutes after the hour punched on it and that the passenger should see that the line and the time were correctly punched, but no time was punched on a transfer by the conductor of the local line, though it had been in fact received within fifteen minutes from the time it was presented to defendant. Held, that the rule requiring the hour to be punched on the transfer was reasonable, so that the passenger could not recover damages from defendant company as for assault for being ejected. (Weber v. Rochester S. & E. Ry. Co., 129 N. Y. Sup., 304.)

New York.—Mandamus—Compelling Construction of Railroad—Petitioner.

A private person, not interested otherwise than as one of the public, cannot have mandamus to compel a street railroad company to build its road into a certain village as required by its franchise, the grievance which he would attempt to redress being a public and not a private injury, for which only the State may sue. (People ex rel. Karl et al. v. United Traction Co., 130 N. Y. Sup., 477.)

New York.—Taxation—Exemption.

Under rapid transit act (Laws 1891, Chap. 4, Sec. 35, as amended by Laws 1900, Chap. 616, Sec. 4) exempting from taxation the equipment used in operating subway railroads, such equipment is not taxable because under an exchange of power with another company a little more power was furnished than was received. (People ex rel. Interborough Rapid Transit Co. v. O'Donnell et al., Commissioners of Taxes and Assessments, 95 N. E. Rep., 762.)

New York.—Franchises—Actions to Forfeit.

An action to forfeit a street railway franchise for non-use can be brought only by the people, acting through the Attorney General.

An action by a city against a street railway company for the removal of worn and defective rails, creating a nuisance, because dangerous obstructions in the streets, does not involve an adjudication forfeiting the franchise of the company for non-use, the claim of nuisance not resting on the mere non-use of the franchise. (City of New York v. Montague et al., 129 N. Y. Sup., 1084.)

New York.—Public Service Commission—City Ordinance.

Public service commissions law (Laws 1907, Chap. 429; Consol. Laws 1910, Chap. 48) provides that whenever the commission after hearing shall be of the opinion that the service of any street railway corporation is inadequate the commission shall first determine what would be adequate service and prescribe the same by an order to be served on the carrier, and that every order so made shall take effect at the time therein specified and shall continue in force for the period therein designated unless earlier modified or abrogated by the commission or unless unauthorized by law or in violation of the Constitution of the State or the United States. Held, that where the commission passed on and prescribed the frequency with which a street railroad company should operate cars on certain of its lines, the city had no power by ordinance to require a more frequent service, although the railroad company's charter reserved to the city the power to prescribe reasonable regulations with reference to the operation of the road in accordance with public requirements and convenience. (City of Troy v. United Traction Co., 95 N. E. Rep., 759.)

Washington.—Extension of City Limits—Conditions in Franchise—Fares.

A franchise to operate a system of street railroads in a city which provides that the fare shall not exceed 5 cents between points within the city limits, though a transfer shall be necessary, is applicable to territory subsequently annexed to the city, and passengers within the territory annexed must be carried for 5 cents. (State ex rel. Dennison v. Seattle, R. & S. Ry. Co., 116 Pac. Rep., 638.)

LIABILITY FOR NEGLIGENCE

Colorado.—Termination of Relation of Passengers—Care Required.

In the transportation of passengers on street cars the relation of carrier and passenger does not terminate until the passenger has alighted and has both feet squarely on the ground. The carrier up to that time is bound to exercise the strictest vigilance not only in carrying him safely to destination but also in setting him down. (Denver City Tramway Co. v. Hills, 116 Pac. Rep., 125.)

Connecticut.—Defective Streets—Actions—Evidence.

Where, in an action against a city for injuries to a street car conductor struck by a projecting plank placed by the

city in the street to protect work thereon, there was evidence that the conductor knew of the planks and that the motorman, according to the rules, had on a prior trip by signal called the conductor's attention to the obstructions, a charge that if the city and the motorman were negligent and the negligence of the motorman was the proximate cause there could be no recovery was sufficiently favorable to the city, especially in view of the fact that the fellow-servant rule that an employee assumes the risk of injury from the negligence of co-employees could not be invoked by the city. (Conway v. City of Waterbury, 80 At. Rep., 83.)

Illinois.—Police-Power—Injury to Property—Use of Street Railroads.

The right of a city, by the exercise of its police power, to regulate any business or the use of any property does not give the power to prohibit the conduct of a lawful business or to suppress entirely the use of property.

A city cannot, by mere declaration, show the operation of a street railroad constructed under authority of law to be a nuisance and subject its tracks to removal, merely because its operation may be dangerous, since the public welfare declares that there should not be a discontinuance of the operation of an authorized railroad. (City of Chicago v. Chicago & O. P. Elevated R. Co.)

Indiana.—Look and Listen Rule on Highway.

The look and listen rule does not apply in all its force to persons about to cross street railroad tracks laid on streets or highways in closely populated localities. (Henry v. Epstein, 95 N. E. Rep., 276.)

Indiana.—Duty of Conductors Not Absolutely to Know Passenger Had Alighted.

In an action for injuries to a street car passenger while alighting, an instruction that it was the duty of the conductor to see that no passenger was in the act of alighting therefrom, or in a dangerous position, before putting the car in motion was erroneous because it led the jury to believe that it was the absolute duty of the conductor to know that plaintiff was alighting when it was put in motion, regardless of whether such conductor had an opportunity to know such fact and without regard to whether, if he had exercised the care which the law required, he could have known that she was leaving the car. (Louisville & S. I. Traction Co. v. Korbe, 94 N. E. Rep., 768.)

Kentucky.—"Proximate Cause"—Defects in Street.

The proximate cause of injury is that which in a natural and continuous sequence, unbroken by independent causes, produces the injury, and without which it would not have occurred. Proximity as to time or place is unimportant except as showing proximity of causation.

Decedent, through defects in a street rendering it unsafe for travel, was thrown from his wagon upon a street car track immediately in front of a car running at a dangerous and negligent rate of speed and was thereby killed. Held, that the negligence of both the city and the street railway company may be deemed the proximate cause of the death. (City of Louisville v. Hart's Adm'r, 136 S. W. Rep., 212.)

Michigan.—Premature Start—Negligence.

Plaintiff boarded a street car and, there being no empty seat, stood holding onto a seat. A passenger moved to make room for her, and at that moment the brake was put on to stop the car at a switch, and she fell forward and was injured. The car was running fast when the brake was put on, though, as plaintiff knew, it had but half a block to go before making the required stop. The stop made was sudden but not extraordinarily so. Held, that actionable negligence was not shown. (Ottinger v. Detroit United Ry., 131 N. W. Rep., 528.)

Missouri.—Passengers Who Board Cars at Non-Stop Points.

A person attempted to board a slowly moving street car just starting up a viaduct. He succeeded in placing one foot on the lower step, but was unable to pull himself up, and he collided with a rod of a sign on the viaduct warning trespassers. The conductor quickly discovered his peril and tried to assist him to board the car, but without success. Held, that the conductor was as a matter of law not negligent for failing to signal the car to stop, instead of attempting to assist such person to board the car. (Mathews v. Metropolitan St. Ry. Co., 137 S. W. Rep., 1003.)

Missouri.—Passenger Arising from Seat Before Car Stops.

It is not negligence for a passenger in a street car to get up from his seat on giving a signal for a stop and go to the platform and stand on it ready to get off when the car shall stop. (Holland v. Metropolitan St. Ry. Co., 137 S. W. Rep., 995.)

Missouri.—Experts—Qualification—Speed.

Where a motorman had worked for defendant as a motorman on the street in question for eleven weeks on the same character of car as that by which decedent was struck and killed and was familiar with the equipment, he was competent to testify to the distance within which a car could be stopped at a given speed, equipment, load, grade and condition of track. (Ellis et al. v. Metropolitan St. Ry. Co., 138 S. W. Rep., 23.)

New Jersey.—Death of Employee from Broken Wire.

A street railroad company cannot avoid liability for death of a conductor caused at night by coming in contact with a broken trolley wire lying on the ground on the theory that he was a mere volunteer in leaving his car to investigate the break. (Martin v. North Jersey St. Ry. Co., 80 At. Rep., 477.)

New York.—Collision with Vehicle Crossing Track.

One who attempted to drive his heavily loaded wagon across a track at a street intersection, when a car was standing at the crossing discharging passengers, and whose wagon was struck by the car, which suddenly started, was not guilty of contributory negligence as a matter of law. (Hill et al. v. Brooklyn Heights R. Co., 130 N. Y. Sup., 387.)

New York.—Hours of Labor of Motormen and Conductors.

In an action against a street railroad, whose main line of travel lay without the corporate limits of cities of the first and second class, for personal injuries to a passenger, held not negligence on the part of the defendant to allow the motorman and conductor to remain on duty for thirteen hours, for Labor Law (Consol. Laws 1909, Chap. 31), Sec. 6, providing that ten hours' labor shall constitute a day, applies only to street railroads whose line of travel lies principally within the corporate limits of cities of the first and second class, and Penal Law (Consol. Laws 1909, Chap. 40), Sec. 1271, has no application to this case, as the motorman and conductor had not been on duty for sixteen hours. (Gleason v. Hudson Valley Ry. Co., 128 N. Y. Sup., 759.)

Ohio.—Assault by Inspector—Master's Liability.

The liability of a carrier for injuries to a passenger from an assault committed by an inspector depended on whether the inspector at the time of the assault was acting within the scope of his employment. (Goodwin v. Cincinnati Traction Co., 175 Fed. Rep., 61.)

Rhode Island.—Collision with Vehicles—Burden of Proof.

A driver of a vehicle struck by a street car, in suing for his injury, has the burden to show exercise of care by himself, and that the accident was caused by negligence of the company's employees. (St. John v. Rhode Island Co., 79 At. Rep., 1101.)

Texas.—Master and Servant—Injury to Lineman on Tower Wagon.

An employee of an electric railway company employed to repair wires by means of a tower wagon is not guilty of contributory negligence in working on the wagon, and could assume that he would be safe from cars running into the wagon. (El Paso Electric Ry. Co. v. Shaklee, 138 S. W. Rep., 189.)

MISCELLANEOUS

Washington.—Electricity Supply—Performance of Contract.

Where the voltage required by a contract to supply electricity was not less than 580, the fact that it dropped below that requirement on a few occasions, while in some instances the voltage was above the contract requirement during fifteen-minute periods which were to be used as a basis for ascertaining the amount of power furnished, did not constitute a breach of the contract where there was no claim that the railway company receiving the power was damaged by lack of power or received less than it required. (Seattle R. & S. Ry. Co. v. Seattle-Tacoma Power Co., 116 Pac. Rep., 289.)

News of Electric Railways

Interurban Rights and Other Toledo Matters

The question of handling interurban cars was discussed at a conference between Attorney Rathbun Fuller and City Solicitor Schreiber at Toledo, Ohio, on Feb. 16. President Coates of the Toledo Railways & Light Company was present. It developed that the contracts between the interurban railway companies and the Toledo Railways & Light Company terminate when the franchise on the lines which they use expires. It is said that most of these contracts have already expired and must be renewed after the new franchise is granted. Representatives of all the interurban roads have been asked to be present on Feb. 20 for the further discussion of this question.

At the meeting, on Feb. 16, the Toledo & Indiana Railway Company was represented by S. C. Schenck and C. F. Chapman, Jr. Mr. Schenck stated that his company paid the Toledo Railways & Light Company 3½ cents for every passenger carried inside the city limits. This is more than the company is at present collecting from its own passengers. Mr. Schenck said he believed that if his company collects a fare of 5 cents for the service inside the city limits the division should be equal. However, his company does not desire to carry local passengers and would prefer, in any new arrangement made, that provision be made that interurban cars shall not be required to stop for passengers, as much time is lost through frequent stops within the city limits. This company pays $500 per month to the local company for the use of its tracks for passenger and freight cars during the winter and $600 during the summer.

No carload freight is hauled over the city streets by the interurban lines. This is avoided by a contract with the Terminal belt line, which takes the carload business over its own lines.

At the conference on Feb. 16 the question of fare was reached by the negotiators, but it was agreed to pass it for the present and take up other subjects. No date for the consideration of this point was selected. Attorney Fuller objected to giving the city the right to order the company to change its system of accounting, because of the expense that would be involved. He suggested that the system approved by the American Electric Railway Association be used. This system is now in use by the company. It was agreed that the company shall furnish a bond of $100,000 to insure that it will comply with the terms of the ordinance.

On Feb. 16 Carl Nau, who represents the city as an expert accountant, informed Mayor Whitlock that he would have a man begin work on the books of the company on Monday, Feb. 19. From the data gathered by Mr. Nau and his assistants, facts concerning the operation of the road on a 3-cent fare will be secured. This information will be used in settling the schedule of fare to be used, if a sliding scale is adopted, or a fixed rate if it is decided to adopt this plan. The trial period of operation at this rate will end on April 8, but will probably be removed at the end of this time if the results are satisfactory to the company officials.

The negotiators reached an agreement on Feb. 13 to the effect that the city shall not direct any change in the motive power, trolley wires and poles of the company for eight years after the granting of a new franchise and that a notice of one year must be given after the expiration of that period in case any change is desired. This will make it impossible for the city to compel any changes of this kind for nine years. Attorney Fuller at first insisted upon a two years' notice, but compromised on one year. The clause adopted provides for the use of electricity as a motive power and that no change shall be made without the consent of the city. Overhead trolley wires are to be used and Council may from time to time fix the height of poles and wires from the street and say where they shall be located. The city is allowed to use the poles and apparatus for carrying its telegraph and fire alarm systems. Competing companies may use ⅛ mile of the company's wires for each mile of their own construction, as provided for the use of tracks.

According to the report made public the latter part of last week, the net income from all departments of the Toledo Railways & Light Company was $1,014,534. The total interest paid was $820,424, leaving a surplus of $194,110. The net earnings of the railway department were $478,372. The operating expenses of the railway department include maintenance at 6 cents per car mile. Of the gross earnings of the electric, gas and heating department, $250,732 was charged to the railway department for power at 1 cent per kw-hr. The company owns 116.9 miles of city tracks and also owns all the capital stock of four interurban roads with a total of 125.71 miles of track.

Recommendations for South Brooklyn Rapid Transit Lines

President McAneny, of the borough of Manhattan, New York, has introduced into the Board of Estimate the report of the committee, of which he is chairman, on the South Brooklyn rapid transit lines which it is proposed to build. This is supplementary to the report of his committee of last June. The original tri-borough plan provided for the extension of the Fourth Avenue (Brooklyn) subway, now in course of construction, from its present terminus at Forty-third Street to Fort Hamilton, with an extension branching out under Thirty-ninth Street as a subway continuing under New Utrecht Avenue and West End Avenue, and as an elevated road along Stillwell and other avenues to Coney Island.

The committee has decided to modify this as follows:

1. An extension of the present Fourth Avenue subway from Forty-third Street as a four-track subway to a point to be determined later, where a connection can be made with an extension to Staten Island. From this point the Fourth Avenue line would run as a two-track subway to Eighty-sixth Street.

2. An extension of the Fourth Avenue subway through Thirty-ninth Street, as a three-track subway to New Utrecht Avenue. Thence the line would be elevated to Coney Island.

This plan does not take in the removal from the street surface of the Sea Beach and Culver lines to Coney Island, which was included in the offer made by the Brooklyn Rapid Transit System on March 2 and April 25, 1911. The Board of Estimate assumes that the company will be willing to operate the Fourth Avenue extension to Eighty-sixth Street and Coney Island, and will also elevate its present beach lines to Coney Island. These are:

1. A three-track elevated line on the Sea Beach right-of-way from Sixty-second Street to Coney Island.

2. A three-track elevated line on the old Culver route from Tenth Avenue to Coney Island.

The lines would, the Board of Estimate committee declares, be operated in connection not only with the present Brooklyn Rapid Transit lines, but also the new system which it is proposed to grant to the company—that is, the Broadway-Lexington Avenue route, Fourth Avenue, Brooklyn; the Brooklyn loop, the Broadway and Fifty-ninth Street lines, and the lines to Astoria and Corona, in Queens.

The company has promised to give free transfers between the extension of the Fourth Avenue Subway at Eighty-sixth Street and the surface cars running to Fort Hamilton.

The committee also considered favorably the construction of a tunnel from the extension of the Fourth Avenue subway to Staten Island. It suggests that from some point to be determined, which is likely to be about Sixty-fifth Street, a tunnel be run under the bay, which could be used jointly by the city as a passenger subway and by the railroads with terminals in Staten Island or New Jersey as a freight road. It is estimated that such a tunnel would cost $12,000,000, and that the railroads might be willing to pay half. Of the city's $6,000,000, $1,000,000 could be charged off from the cost of subways by an arrangement with the Board of Water Supply. When the Catskill aqueduct system is complete it is intended to bring the water for Staten Island from Brooklyn by a pipe under the Narrows. The engineers state that there is no reason why the water pipe should not be carried along the joint passenger and freight tunnel, and that thereby the city would be saved an expenditure of $1,000,000.

The report was signed by Borough Presidents McAneny, Miller and Cromwell and all the Public Service commissioners except Commissioner Cram. The conference committee on rapid transit will act on the report of the committee next week.

Detroit Traction Affairs

On Feb. 16 Fred A. Baker, an attorney representing the Detroit United Railway Company, filed an answer to the suit recently started by Corporation Counsel Lawson to compel the company to carry passengers to and from the city limits on both the Jefferson and Grand River Avenue lines at all hours of the day and night for a single fare. Mr. Baker argued that the company's franchise in the territory recently annexed to the city gives it the right to collect an extra fare over those portions of the lines.

The Supreme Court of Michigan recently decided that workingmen's tickets must be accepted for a continuous ride to and from the present city limits during the hours provided in the franchise. This is now being done, but the decision has been appealed to the United States Supreme Court. Mr. Baker maintains that the company has a legal right to continue collecting an extra fare pending the decision of the higher court.

The Wayne County Circuit Court, Judges Mandell, Hosmer and Murphy on the bench, handed down a formal decree on Feb. 15 in the case of the city against the Detroit United Railway to the effect that the company must pay $200 a day as rental on the lines where its franchises have expired or vacate. In order to enforce this decision, the court wrote into the decree the condition that if the company neither paid the rental nor removed its property from the streets, then the tracks would be declared a public nuisance and the court will grant a writ of assistance to put the company off these particular streets, without further hearing or argument. In effect the court has already granted the writ to be issued on request of the Common Council. The court, however, declined to grant judgment for the back rental which Corporation Counsel Lawson claims is due for the time between the alleged expiration of the franchises and the date of the decree. It is held that the city must recover that, if it is recoverable, in another action. Both sides will appeal to the Michigan Supreme Court. Mr. Lawson will contend for the recovery of back rental, while Mr. Baker will object to the grant of a writ of assistance and the other relief which the decree gives the city.

New York City Transit Notes

On Feb. 13 the Public Service Commission let the contract for Section 9 of the Broadway-Lenox Avenue line of the projected New York City subway. This section extends from Sixty-seventh Street and Seventy-ninth street in Lexington Avenue. Patrick McGovern, of Boston, obtained the award for $1,961,000, which was the lowest bid. He put up a bond for $50,000.

John D. Crimmins, Daniel M. Brady and Samuel A. Megath, as a committee of contracting creditors of the New York City Railway, filed exceptions in the United States District Court on Feb. 19 to the report filed by William L. Turner on Feb. 7 last. Objection is made to the finding of the master that delivery of collateral improvement notes of the Metropolitan Street Railway was the consideration for the promise of the New York City Railway to furnish it with money under the leases and contracts, on the ground that under these leases and contracts this obligation was imposed upon the Metropolitan Street Railway. It is further claimed that the receiver of the Metropolitan Street Railway and the company itself had no part in the proceeds and that the New York City Railway has a valid claim against the estate of the Metropolitan Street Railway in the sum of $4,000,000 for improvements. It is further claimed that the report should include that the New York City Railway is entitled to the sum of $233,483 for investments and also that the New York City company is entitled to use the 4-5 per cent improvement notes of the Metropolitan Street Railway of the face value of $1,000,000 now in its possession, as a set-off or counter claim against the claims of the Metropolitan Street Railway.

On Feb. 14 Mayor Gaynor returned to the Board of Estimate duly approved the resolution of that body granting the Third Avenue Bridge Company an extension of time to commence operation of its railway on East Fifty-ninth and East Sixtieth Streets between Third Avenue and the Queensboro Bridge, and over the bridge on Jackson Avenue in the borough of Queens.

Cleveland Traction Affairs

The new schedule on Superior Avenue, Cleveland, was put into operation last week. Every other stop has been eliminated and the schedule time is fixed at twenty-eight minutes, a reduction of four minutes from the original. To better the running time still further, every third car is turned at the carhouses on 105th Street. On Feb. 19 Street Railway Commissioner Peter Witt said that the cars had not yet been able to get down to the new schedule, and some of them were running as much as twelve minutes behind. Mr. Witt, however, said that it is the duty of the company to see that the schedule is maintained and that it was not for him to carry into effect the order made by the City Council.

It has been intimated that the statement of the Cleveland Railway Company for January will show a large deficit in the operating fund and that the officers will in all probability ask for an increase from 11½ cents to 12½ cents per car mile in the allowance under the Tayler grant. During the eight months that the company was allowed the larger amount an old deficit was wiped out, but it is said that the operating expenses are increasing and it is apparently necessary to have this increase. Street Railway Commissioner Witt would not say on Monday, Feb. 19, whether he would recommend the increase or not. It is believed that the difference would make such a heavy cut on the interest fund that it would endanger the present fare and probably necessitate the restoration of a charge of 1 cent for transfers.

First Report of Connecticut Utilities Commission

The Public Utilities Commission of Connecticut has made a preliminary report to Governor Simeon E. Baldwin covering the period from Sept. 9 to Dec. 31, 1911. The first complete report will be made in December, 1912. The work of the commission has so far been largely preliminary, so that the summary of its work is brief. The commission says that it has been difficult to obtain a complete and accurate list of the active public service corporations in the State, but to date it stands as follows: Steam railroad, 7; street railway, 13; telephone, 2; telegraph, 2; express, 1; water, gas and electric light, 179, making a total of 204.

Under the head of "complaints and petitions" the commission enumerates the Bridgeport complaint regarding high steps on trolley cars and the order made for its abatement; and also the hearing on the Manchester fare matter, which has not yet been decided. The commission has ordered the construction of a new highway bridge in New Haven, the cost to be divided between the city and the Shore Line Electric Company.

An appendix of the report gives the ruling of the commission in the question as to the degree of publicity to be given to facts, circumstances and evidence given before the commission. The laws under which the commission operates are also included in the pamphlet.

March Meeting of American Railway Engineering Association

The thirteenth annual convention of the American Railway Engineering Association will be held in the Congress Hotel and Annex, Chicago, Ill., Tuesday, Wednesday and Thursday, March 19, 20 and 21, 1912. The sessions of the convention will be held in the Florentine Room of the Congress Hotel and Annex, beginning at 9 a. m. and 2 p. m. daily. The business before the convention will be the annual election of officers, the address of the president, reports of officers and the consideration of the reports of the twenty-one standing and special committees. The annual dinner will be given on the evening of March 20, in the Gold Room of the Congress Hotel and Annex, beginning at 7 p. m. The following speakers will address the

members and guests: L. F. Loree, president Delaware & Hudson Company, New York (past-president of the American Railway Association); Hon. F. D. Monk, K. C., M. P., Minister of Public Works in the Dominion Cabinet, Ottawa, Canada, and Ray Morris, *Railway Age Gazette*, New York.

PROGRAM OF ASSOCIATION MEETINGS

New York Street Railway Association

The Street Railway Association of the State of New York is to hold its fifteenth quarterly meeting at the Fort William Henry Hotel, Lake George, N. Y., on the evening of Tuesday, March 12, and on Wednesday, March 13. The Tuesday evening session will be opened with an informal dinner at 7:30 o'clock at the Fort William Henry Hotel, after which two speakers will address the meeting. There will be morning and afternoon sessions on Wednesday, March 6, at the Fort William Hotel, at which the program hereinafter given will be carried out. All requests for hotel accommodations should be made as early as possible to Mortimer M. Kelly, manager, Fort William Henry Hotel. The program follows:

"Method of Ordering and Handling Stores, Including Disposition of All Scrap Material," by H. M. Butler, purchasing agent New York State Railways, Rochester.

Papers on "What Economies Can Be Profitably Effected in the Following Departments," viz: (a) transportation department, J. F. Hamilton, superintendent of transportation United Traction Company, Albany; (b) maintenance of way department, B. E. Tilton, engineer maintenance of way New York State Railways, Rochester; (c) electrical department, R. A. Dyer, Jr., assistant general manager Auburn & Syracuse Electric Railroad, Syracuse; (d) mechanical department, J. P. Barnes, electrical engineer Syracuse Rapid Transit Railway, Syracuse; (e) accounting department, F. E. Belleville, auditor Schenectady Railway, Schenectady.

New England Street Railway Club

The twelfth annual banquet of the New England Street Railway Club will be held at the Hotel Somerset, Boston, on Tuesday evening, March 19, 1912. The speakers for the evening will be Eugene N. Foss, Governor of Massachusetts; Henry Cabot Lodge, United States Senator; Judson C. Clements, Interstate Commerce Commission; W. B. McKinley, Congressman from Illinois and president of the Illinois Traction Company; Patrick Calhoun, president United Railways of San Francisco; Thomas N. McCarter, president American Electric Railway Association and president of Public Service Company, Newark, N. J., and Oscar T. Crosby, president of several electric railway and lighting companies, electrical engineer and explorer. The toastmaster will be Asa P. French, United States district attorney. The final detailed announcement will be published later.

Receivership of the Kansas City Viaduct & Terminal Railway Terminated.—Ira G. Herrick has been discharged as receiver of the Kansas City Viaduct & Terminal Railway and the property has been turned back to the officers of the company. The relations which exist between the Kansas City Viaduct & Terminal Railway and the Metropolitan Street Railway, Kansas City, Mo., were referred to in the ELECTRIC RAILWAY JOURNAL of Dec. 16, 1911, page 1253.

Another Utility Bill in Washington.—Representative Doremus of Michigan has introduced in the House a bill to create a public utility commission for the District of Columbia to have jurisdiction over all the quasi-public corporations. The commission is to consist of five members, to be appointed by the President with the consent of the Senate. The members of the commission are all to reside in Washington and the salary of each member is to be $12,000 a year. The expenses of the commission are not to exceed $250,000 a year.

Proposed Electrical Ordinance at Minneapolis.—The City Council has prepared an ordinance regulating the installation, operation and maintenance of all outside overhead and underground electric wires, poles, cables, conduits, appliances, fixtures and apparatus carrying current in excess of 650 volts. The ordinance provides a number of methods of advising both the public and employees of the dangers connected with all wire or apparatus carrying electric current, and is drawn along the exact lines provided in an order issued by the State Labor Commission.

Scranton Traffic Statistics.—At the recent banquet tendered by the Scranton Railway to 150 employees at Hotel Casey, Treasurer C. L. S. Tingley, representing the American Railways Company, the holding corporation, stated that the Scranton lines carried more passengers last year than in any previous year, the total being 29,000,000, of which 28,451,000 were cash fares. Each fare (4.47 cents) was divided into the following parts: Maintenance of way and structures, 0.31; equipment, 0.44; machinery, 0.30; transportation, salaries, etc., 1.12; general expenses, damages, etc., 0.44; taxes, 0.15; interest on bonds, 0.93, and profit for stockholders, 0.69.

Governor of Pennsylvania Names Commission to Draw Liability Bill.—Governor Tener has named the members of the state commission which is to draft a workmen's compensation or employers' liability bill to be presented to the next Legislature. The members of the commission are David R. Reed, Pittsburgh, lawyer, chairman; J. Barry Colahan, Philadelphia, lawyer; Morris Williams, Philadelphia, and George C. Hazel, Chester, representing employers; Francis Feehan, Pittsburgh, district leader of the miners' union, and John J. Cushing, Monessen, rod mill roller, representing employees; Prof. Francis H. Bohlen, law department of the University of Pennsylvania, expert and secretary of the commission.

Electric Railway Extensions in Western New England.—The *Western New England*, a paper published by the Springfield Board of Trade, contains in its January issue an account of extensions being made in that part of New England by the Berkshire Street Railway Company. A connection is being made with the system at Springfield, Mass., and heavy type of construction is being used. The article also describes the advantages to the towns along the route of a frequent freight and passenger service. The same issue contains an article on the "Need for Transportation in Western Massachusetts," by L. A. Storrs, now vice-president of the Connecticut Company. Mr. Storrs points out that the need of this territory is better transportation facilities.

LEGISLATION AFFECTING ELECTRIC RAILWAYS

KENTUCKY

A House committee of the Kentucky Legislature, now in session at Frankfort, recently reported favorably upon a measure which prohibits the issuance of passes by steam or electric railroads operating in Kentucky. The bill provides a fine of from $500 to $2,500 for each violation of the law.

MASSACHUSETTS

The committee on street railways has sent in an adverse report on House Bill 333, which provided that no street or elevated railway company shall carry on any car, either within the car or on the platform, more than five passengers who are unprovided with seats, and the House has accepted the report. The House has also sustained the committee in an unfavorable report on House Bill 646, which was presented on petition of C. R. O'Connell, for the purpose of forbidding street railway companies to charge more than one-half the regular fare for the transportation of passengers unprovided with seats. Leave to withdraw has been reported by the committee on House Bill 877, which required street railways to pay damages to abutters on highways in cases where a track is laid and operated at one side of the highway, the minimum damage being set at one-third the assessed valuation of that part of the estate lying within 200 ft. of the street line. An adverse report has been sent in by the committee upon House Bill 1079, which provided that conspicuous day and night signals shall be furnished every drawbridge over which street railway cars are operated, so as to indicate to the motorman of every approaching car whether the draw is open or closed. House Bill 1485, providing that fares shall not be over 3 cents on street railways from 5 a. m. to 8 a. m., and 5 p. m. to 7 p. m., has been unfavorably reported by the committee. An adverse report has been submitted to the House upon Bill 1586, which requires street railways to equip their cars with fenders and wheelguards. Great interest was shown in a hear-

ing last week upon a bill to reduce the hours of street railway employees to nine hours in eleven. The hearing was held in the evening, in order to enable transportation employees to attend in large numbers. Sentiment was divided with respect to the bill, and after preliminary discussion about two-thirds of the employees present expressed themselves as opposed to its passage. For the street railway companies, Bentley W. Warren pointed out that the passage of the bill would result either in the reduction of street car service or a decrease in wages. The managers of the principal companies in the State believe that they are considering the best interests of their men in their opposition, and that the advocates of the bill do not realize that such a rearrangement of runs as would be necessary must mean the lowering of wages, and that not over nine hours' work could be permitted, even if employees desired to work beyond that period. Various employees speaking against the bill pointed out that air brakes, vestibules and other modern equipment render the work of the motorman easier than in former times. A. S. Richey, superintendent time tables Bay State Street Railway, pointed out that under the new bill if extra men were not employed the company would have to drop out 3498 trips per day, or 11.4 per cent of the present service. If extra men were required, 3294 would be necessary in addition to the present number, or an increase of 46 per cent. This would increase the yearly payroll by $1,238,600, at the minimum wage of $10 per week, or 21 per cent of the total wages paid. Meeting the contention of the advocates of the bill that the average length of service is 3.5 years, Mr. Richey said that the average length of service of the men who have been on the lines over a year is 8.14 years, and that 551 men, or 7.7 per cent of those employed, have been in the company's service twenty years or more. He further stated that in twenty years the capacity of open cars has increased 48 per cent, and of closed cars 36 per cent. The speed has increased 16 per cent, and wages have risen 31.5 per cent. Twenty years ago no cars were equipped with air brakes or headlights, while to-day 34.3 per cent are equipped with the former and 27.8 per cent with the latter. Only thirty-six interurban cars in the entire State are not so equipped. The weight of rails has increased 54 per cent in the past twenty years. C. S. Sergeant, vice-president Boston Elevated Railway Company, also spoke in opposition to the bill, stating that he felt that he was speaking in behalf of the employees themselves. He pointed out that great difficulty would be experienced in handling the rush hour traffic under the bill, and also said that at present the majority of runs are so divided that each employee has a rest period of about one and a half hours in the middle of his runs, and that if this should be cut off it would be undesirable from all standpoints, including that of the employees. Further, as employees are paid by the hour, a reduction in the working time would result in a reduction in the amount which each man could earn, and there would not be any possibility of making up for the time lost, as in some lines of industry. The companies cannot afford to pay for work not done, and Mr. Sergeant said that a substantial reduction in trips would be necessitated on the Boston Elevated system if the bill should pass. The committee on metropolitan affairs has reported a resolve requiring the Boston Transit Commission to investigate and report to the next Legislature upon the cost of extending the authorized Dorchester subway, specifying the route.

MISSISSIPPI

The Potter bill, which places all public utilities in Mississippi under the jurisdiction of the Railroad Commission, was passed by the Senate of the State Legislature on Feb. 1 by a vote of twenty-three to ten. The bill is now before the House. Even public utilities owned by municipalities would come under the control of the new body.

NEW YORK

A bill has been introduced in the Senate which provides for a special election in the city of New York on April 2, when the people can vote on the proposition for the municipal operation of subways. A bill has been introduced in the Senate to amend the railroad law which requires every train of two or more cars on a steam or electric railroad in the State to carry two competent engineers or motormen. A penalty of $25 for each day the law is violated is to be collected by the Public Service Commission.

Financial and Corporate

Stock and Money Markets

Feb. 20, 1912.

Stock transactions entered into on the New York Stock Exchange this week have been in the smallest volume recorded since last July. To-day's market was exceedingly inert, and practically none of the usually active stocks was traded. Prices have not moved appreciably during this inactivity. There continues to be an abundance of idle money. Funds are being shipped abroad as soon as opportunity offers, where much better rates are obtainable than are quoted here. Rates in the New York market to-day were: Call, 2¼@2½ per cent; ninety days, 2¾@3 per cent.

Prices advanced throughout the Chicago list to-day. Chicago Railways income 4 per cent bonds rose from 54⅛ to 50⅝.

The Philadelphia market has been quiet during the week, and no feature of moment developed in to-day's trading.

Copper shares have occupied the Boston Exchange this week. Although trading to-day was in narrow volume several advances were made.

Demand continues to be very light in Baltimore and prices show but fractional changes.

Quotations of traction and manufacturing securities as compared with last week follow:

	Feb. 14	Feb. 21
American Brake Shoe & Foundry (common)	a95½	a94
American Brake Shoe & Foundry (preferred)	a136½	a132
American Cities Company (common)	29¾	*29¾
American Cities Company (preferred)	80½	*80½
American Light & Traction Company (common)	a300	a302
American Light & Traction Company (preferred)	a107	a108
American Railways Company	a45	a45¼
Aurora, Elgin & Chicago Railroad (common)	*39½	a44
Aurora, Elgin & Chicago Railroad (preferred)	*84	a86¼
Boston Elevated Railway	a132	a132
Boston Suburban Electric Companies (common)	a15	a15
Boston Suburban Electric Companies (preferred)	74	a74
Boston & Worcester Electric Companies (common)	a12½	a12½
Boston & Worcester Electric Companies (preferred)	a58	a57
Brooklyn Rapid Transit Company	77¾	78
Capital Traction Company, Washington	a123¼	a123½
Chicago City Railway	a190	a190
Chicago Elevated Railways (common)	a36½	a36½
Chicago Elevated Railways (preferred)	a94	a94
Chicago Railways, ptcptg., ctf. 1	a101	a100
Chicago Railways, ptcptg., ctf. 2	a36	a35½
Chicago Railways, ptcptg., ctf. 3	a11	a10½
Chicago Railways, ptcptg., cts. 4	a6	a6
Cincinnati Street Railway	a131	a130½
Cleveland Railway	a130½	*130½
Cleveland, Southwestern & Columbus Ry. (common)	*4	*4
Cleveland, Southwestern & Columbus Ry. (preferred)	*33	*33
Columbus Railway & Light Company	a80	a80
Columbus Railway (common)	a80	a80
Columbus Railway (preferred)	a100	a92½
Dayton Street Railway (common)	a25	a25
Dayton Street Railway (preferred)	a101	a101
Denver & Northwestern Railway	*137	*137
Detroit United Railway	70	a70
General Electric Company	157	159½
Georgia Railway & Electric Company (common)	174	a168
Georgia Railway & Electric Company (preferred)	a88	a87¾
Interborough Metropolitan Company (common)	17⅝	17¾
Interborough Metropolitan Company (preferred)	56½	56¾
International Traction Company, 4% notes, rcts.	*75	*75
Indiana Union Traction Company	*9	*9
Kansas City Railway & Light Company (common)	a22	a22
Kansas City Railway & Light Company (preferred)	a52	52
Lake Shore Electric Railway (common)	*7	*7
Lake Shore Electric Railway (1st preferred)	*90	*90
Lake Shore Electric Railway (2d preferred)	*22	*22
Manhattan Railway	a138½	a138½
Massachusetts Electric Companies (common)	a20½	a21½
Massachusetts Electric Companies (preferred)	a94	a94
Metropolitan Street Railway, New York	*8	*8
Milwaukee Electric Railway & Light (preferred)	105	105
Norfolk Railway & Light Company	26	*26
North American Company	78½	78⅛
Northern Ohio Light & Traction Company (common)	a60	a62
Northern Ohio Light & Traction Company (preferred)	a105	a105
Philadelphia Company, Pittsburgh (preferred)	a44¾	a44¼
Philadelphia Company, Pittsburgh (common)	a54½	54½
Philadelphia Rapid Transit Company	a24	a23⅝
Portland Railway, Light & Power Company	70¼	*70¼
Public Service Corporation	a108	a108
Seattle Electric Company (common)	113¼	115¼
Seattle Electric Company (preferred)	a102¼	102
Third Avenue Railway, New York	41½	41¼
Toledo Railway & Light Company	8⅞	3
Twin City Rapid Transit, Minneapolis (common)	a106	106
United Ry. & Electric Company (Baltimore)	20½	20½
United Rys. Inv. Co. (common)	36⅝	36
United Rys. Inv. Co. (preferred)	64½	64
Virginia Railway & Power Company (common)	a48	a47½
Virginia Railway & Power Company (preferred)	a88	a88½
Washington Ry. & Electric Company (common)	a69½	a72½
Washington Ry. & Electric Company (preferred)	a92⅝	a94
West End Street Railway, Boston (common)	a88	a88¾
West End Street Railway, Boston (preferred)	a102½	a102
Westinghouse Elec. & Mfg. Co.	a72	a73¼
Westinghouse Elec. & Mfg. Co. (1st pref.)	a119⅞	a119⅞

*Last sale. a Asked.

ANNUAL REPORTS

Quebec Railway, Light & Power Company

The annual report of the Quebec Railway, Light & Power Company for the year ended June 30, 1911, contains a statement from R. Forget, the president, which is in part as follows:

"The gross earnings for the year were $1,280,126 as compared with $1,127,952 in 1910, an increase of $152,174.

"The operating expenses were $661,907 as compared with $644,563 in 1910, an increase of $17,344.

"The net earnings were $618,219, an increase of $134,830 over 1910.

"After adding miscellaneous income from subsidiary companies' earnings prior to July 1, 1910, and deducting fixed charges of $456,329, two dividends payable July 15 and April 15, 1911, amounting to $199,990, organization expenses of $10,681, and sundry interest earned of $11,109, there remains a surplus of $62,328.

"The mileage on the city division of the Quebec Railway, Light & Power Company has been increased 0.26 mile by an extension of track in Limoilou ward from the exhibition grounds to the Charlesbourg Road. During the year extensive repairs and renewals have been made and the roadway is in excellent physical condition.

"Forty-eight gondola freight cars, 60,000 lb. capacity; fifteen box freight cars, 60,000 lb. capacity, and two passenger motor cars of standard 400 class have been added to the equipment during the year, while one electric locomotive, constructed in the company's shops, has been in operation for some time with good results.

"A new substation has been constructed at Ste. Anne de Beaupré and one 500-kw motor-generator set with exciter and transformers has been installed therein.

"A new transmission line has also been constructed from Montmorency Falls to Ste. Anne de Beaupré and the voltage increased from 10,000 to 25,000, thus effecting a considerable saving.

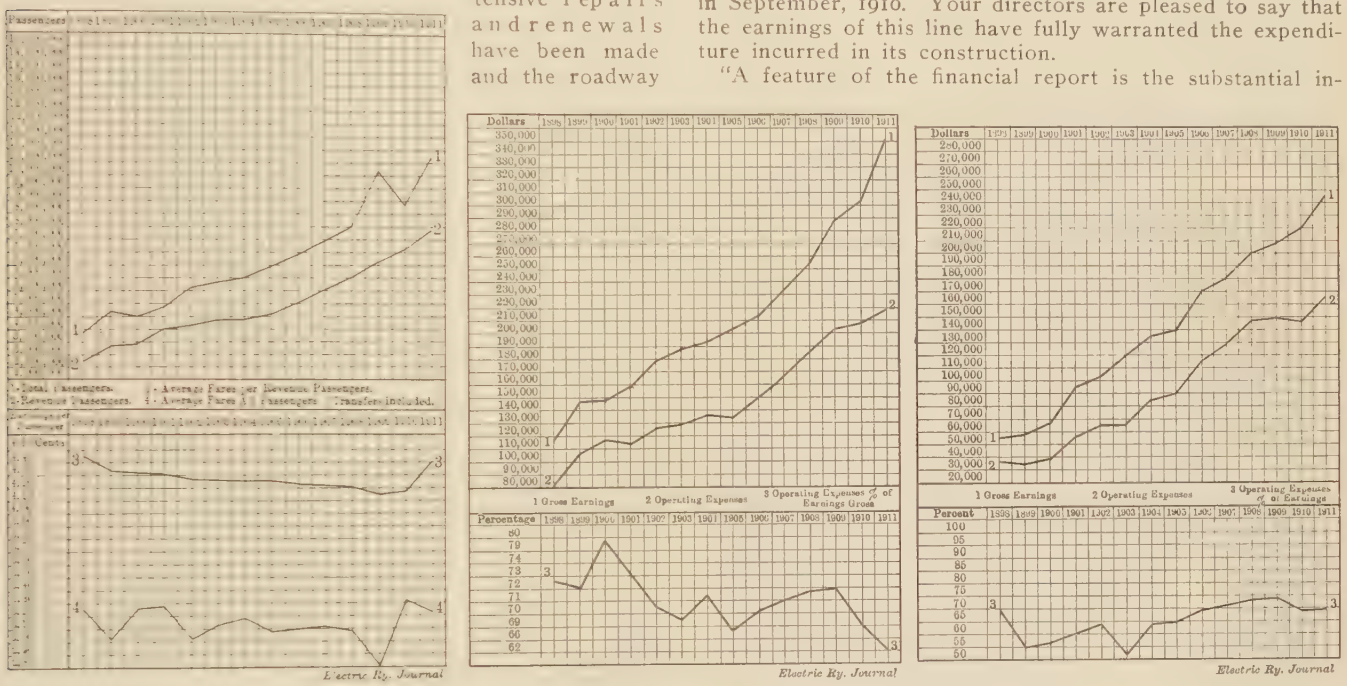
"The company's hotel at Montmorency Falls Park, known as the Kent House, has been enlarged and refurnished throughout. A number of new attractions have been added to the equipment of the Montmorency Falls Park and some of these have already proved profitable as well as serving to induce people to visit the park.

"The construction of the Quebec County Railway was commenced in July, 1910, and the road opened for operation in September, 1910. Your directors are pleased to say that the earnings of this line have fully warranted the expenditure incurred in its construction.

"A feature of the financial report is the substantial increase in gross earnings of $152,174, with an increase in operating expenses of only $17,343.

"In the opinion of your directors the various extensions, improvements and economies made during the year will commence to bear fruit only during the present year and will be reflected in the next annual report.

"It is expected that the company's new office building, which is being erected in the heart of the city at the corner of Crown and St. Joseph Streets, will be ready for occupation very early in the new year. Many applications have already been received for office space in this building. The completion of the building will greatly facilitate the transaction of the company's business, admitting as it will of the consolidation of all the company's executive offices in the one building."



Operating Statistics from Report of Quebec Light & Power Company

Annual Report of The J. G. Brill Company

The report of President Rawle to the stockholders of The J. G. Brill Company for the year ended Dec. 31, 1911, was presented Feb. 12. Some of the main features of the report are printed below:

"The output from the five plants owned and operated by The J. G. Brill Company for the twelve months ended Dec. 31, 1911, amounted to $5,870,907.47. For comparison the amounts of the combined sales of the five companies

for the five years last past are here given: 1907, $9,211,825; 1908, $3,845,173; 1909, $4,261,204; 1910, $5,960,778; 1911, $5,870,907.

"The combined profit resulting from the operation of the five plants during the year 1911, after charging to repairs and maintenance of buildings, machinery and tools the sum of $164,986.95, amounted to $689,409.57, from which there has been set aside for depreciation $134,429.54, leaving a net profit for the year of $554,980.03. The usual quarterly dividend on the preferred stock, at the rate of 7 per cent per annum, amounting to $80,150, was declared by the directors at the meeting held Jan. 15, 1912, and was paid on Feb. 1.

"The well-established policy of keeping up your properties in good physical condition was fully maintained during the year. I have indicated above the large sum expended out of earnings for this purpose and charged to operating expenses. The conservative policy in the matter of depreciation was again followed during 1911, as will be seen by reference to the large sum set aside out of profits for the year into the depreciation reserve.

"While during the year 1911 the conditions which governed the obtaining of orders and their execution by your companies were by no means normal, yet they were much improved in comparison with any year since 1907. This resulted in earnings from the year's business sufficient, after the deduction of all the liberal allowances for repairs, maintenance and depreciation, not only to meet the full dividends on the preferred stock declared during the year but also to add to the combined surplus of your companies the sum of $234,380.

"On Feb. 10, 1912, your combined companies had orders in process of completion amounting to $3,152,156, with a good outlook for profitable work to be executed the coming year."

The combined balance sheet of the companies as of Dec. 31, 1911, and the condensed statement of sales and expenditures for the year 1911 follow:

Combined Balance Sheet Dec. 31, 1911.

Assets:	
Value of properties	$7,950,026
Materials, raw and in process	1,342,500
Bills and accounts receivable	1,489,698
Investments	283,222
Cash	349,442
	$11,414,888
Liabilities:	
Preferred stock	$4,580,000
Common stock	5,000,000
Bonds (John Stephenson Co.)	400,000
Bills and accounts payable	690,367
Surplus	744,521
	$11,414,888

Sales and Expenditures for Year 1911.

Total sales and other income	$5,870,907
Less operating, general and administrative expenses	5,181,498
Profit for year	$689,409
Less amount set aside and added to reserve for depreciation	134,429
Net profit undistributed, added to surplus	$554,980
Surplus account, from previous year	$598,816
Less adjustments	88,675
	$510,141
Profit as above	554,980
	$1,065,121
Less dividends paid during year	320,600
Total combined surplus	$744,521

Advance Stone & Webster Report

Stone & Webster, in advance of the issuance of their manual for 1912 of "Electric Railway, Electric Lighting, Gas and Water Power Companies" under their management, report capitalization and earnings for the year ended Dec. 31, 1911, as follows:

Combined Capitalization:	1911.	1910.
Bonds and coupon notes	$77,901,500	$68,328,500
Preferred and common stocks	83,631,100	79,394,700
Total	$161,532,600	$147,723,200

Earnings, etc., Calendar Years:	1911.	1910
Gross earnings	$23,848,180	$22,023,126
Net income	10,427,605	9,771,211
Interest and taxes	4,966,350	4,818,637
Dividends paid	3,367,776	2,885,763
Balance	2,093,480	2,066,811

The statement of street railway mileage, capacity of power plants, etc., is as follows:

Miles equivalent single track operated, 1130 in 1911, against 1092 in 1910; passengers carried in 1911, 300,330,000, against 286,943,000; total connected electric lighting load equivalent to (in 16-cp lamps) 2,341,880, against 2,094,920 hp; total commercial power load, approximately 130,000 hp, against 112,100 hp; total combined power station capacity, approximately 219,872 hp, against 185,800 hp, of which there is generated by water power 96,720 hp and 84,400 hp, respectively.

Improved Earnings in Philadelphia

On Feb. 19 the board of directors of the Philadelphia Rapid Transit Company issued the accompanying report of operation for January and for the seven months of the fiscal year to Jan. 31, 1912, giving comparisons with the same periods for the previous fiscal year. These comparisons show a striking decrease in the deficits despite an increase in fixed charges. The increase in gross earnings for the seven months period was 5.65 per cent. The figures are as follows:

	Jan., 1912.	Percentage Increase.	Jan., 1911
Earnings:			
Gross passenger earnings	$1,730,719	5.12	$1,646,415
Receipts from other sources	77,753	10.24	70,531
Gross earnings	$1,808,473	5.33	$1,716,946
Expenses:		Percentage. Gross.	
Operating expenses	1,162,812	64.30	1,082,138
Net earnings from operation	$645,661	35.70	$634,808
Fixed charges	740,322	40.93	733,931
Deficit	$94,662	5.23	$99,123

	Seven Months Ended Jan. 31 1912.	Percentage Increase.	1911.
Earnings:			
Gross passenger earnings	$12,587,067	5.51	$11,930,188
Receipts from other sources	565,813	8.96	519,292
Gross earnings	$13,152,880	5.65	$12,449,480
Expenses:		Percentage. Gross.	
Operating expenses	8,021,299	60.98	7,612,557
Net earnings from operation	$5,131,581	39.02	$4,836,923
Fixed charges	5,170,646	39.31	5,118,246
Deficit	$39,065	.29	$281,323

Philadelphia Company Plans Increase in Capitalization

A special meeting of the stockholders of the Philadelphia Company, of Pittsburgh, has been called for April 29 next to consider a proposed increase of the capital stock from $48,400,000 to $73,400,000. The increased capital is to be in the form of cumulative 6 per cent preferred shares. The preference also requires the payment of the par value and all accrued dividends on the preferred stock out of the assets of the company in case of liquidation or a distribution of its assets. The preferred stock, however, does not carry the right to vote, except upon the question of the increase of the mortgage or secured indebtedness of the company or of the issue of further preferred stock of a priority to or parity with the proposed new issue, so long as dividends are paid upon it. In the event of default in the payment of dividends, this preferred stock shall carry with it the right to vote upon all corporate questions on an equality with any other stock of the company which is entitled to vote. The special meeting will also consider the proposition for an increase of the indebtedness of the company to the amount of $10,000,000 by the issue of debentures bearing 5 per cent interest, maturing in ten years, and convertible at the option of the holders into cumulative preferred shares of the company on the basis of twenty shares of stock for each $1,000 of debentures.

The proposed changes in capitalization are in pursuance of the comprehensive plans whereby the street railway properties of the Philadelphia Company are to be consolidated in accordance with the desires of the Pittsburgh City Council, and for the construction of a generating plant in the Pittsburgh district.

City Railway, Dayton, Ohio.—George G. Shaw has been elected a director of the City Railway to succeed R. R. Dickey, who declined re-election.

Columbus (Ga.) Electric Company.—The Columbus Electric Company has increased its capital stock from $250,000 to $731,700.

Cumberland County Power & Light Company, Portland, Maine.—The authorized issue of capital stock of the Cumberland County Power & Light Company is to be increased from $1,000,000 to $5,000,000. This company controls the electric light, power and railway properties at Portland, Maine.

Chicago & Milwaukee Electric Railway.—Kennett Cowan & Company have purchased practically the entire issue of 6 per cent receivers' certificates authorized in 1908 by order of the Circuit Court of the Eastern District of Wisconsin. They are a prior lien on the Wisconsin division.

Chicago & Southern Traction Company.—According to *The Economist*, Chicago, the land, buildings and trackage of this company have been sold at auction to the bondholders by the Western Trust and Savings Bank as trustee, for the nominal sum of $200,000. The Chicago City Railway will take over the portion of the line within the city limits, while the outside lines will be operated by a new company with a capitalization of $1,000,000, to be known as the Chicago & Interurban Traction Company. Operation of that portion to be taken over by the Chicago City Railway will begin almost immediately, while the reorganization of the portion outside of the city limits will take several weeks. The names of those interested in the new company are withheld for the present. The new interurban line will operate its cars to a terminal at Harrison Street.

Citizens' Traction Company, Oil City, Pa.—The properties of the Citizens' Traction Company and the Citizens' Light & Power Company, of Oil City, Pa., have recently been purchased by Brown Brothers & Company, Philadelphia, and their associates. The traction company has outstanding $1,000,000 common stock, $1,000,000 preferred stock and $736,000 first mortgage 5 per cent bonds due 1935.

Duquesne & Dravosburg Street Railway, Duquesne, Pa.—The Duquesne & Dravosburg Street Railway has increased its capital stock from $18,000 to $60,000.

Indianapolis & Louisville Traction Company, Louisville, Ky.—The final report of John E. Greely, receiver of the Indianapolis & Louisville Traction Company, has been filed in Indianapolis, Ind., showing the earnings of the road for January, 1912. A decree of the Federal Court in Indianapolis has ordered that the receivership be concluded and that the railway property be disposed of at a public sale at an early date. The increase in earnings of the road for January, 1912, was 6 per cent, compared with the same month of the preceding year. The gross earnings amounted to $8,055.91, with operating expenses for the month totaling $5,331.85, so that the net returns were $2,724.06. The receivership was begun in June, 1911.

Lake View Traction Company, Memphis, Tenn.—A special meeting of the stockholders of the Clarksdale, Covington & Collierville Interurban Railway has been called for Feb. 29 to vote on purchase of the property of the Lake View Traction Company.

London Underground Railways.—The price at which 15,000 £10 shares of the Underground Electric Railways Company of London, owned by the late C. T. Yerkes, are to be sold under order of court is £2 10s. per share.

Mid-Crosstown Railway Company, New York, N. Y.—This company was incorporated at Albany on Feb. 14 with $500,000 capital stock as a reorganization of the Twenty-eighth and Twenty-ninth Streets Crosstown Railroad, with the following directors: John W. Hamer, Horace A. Doan, Charles E. Loxley and A. Merritt Taylor (the reorganization committee); W. C. Heppenheimer, Jersey City; Abraham S. Gilbert, New York, and Cornelius R. Wright, New York.

Muskogee (Okla.) Electric Traction Company.—The Muskogee Electric Traction Company has purchased the property of the People's Electric Railway, which operates a 9-mile electric railway from Muskogee to Riverside and Fort Gibson.

Ottawa (Ont.) Street Railway.—The Ottawa Electric Railway Company has announced an issue of $600,000 new stock to cover expenditures on extension, new rolling stock, plant, etc. This practically brings the company's stock up to the authorized capital of $2,000,000. Stockholders will be offered the new issue of stock on the basis of one share of new stock for each two shares of the old held.

Pacific Electric Railway, Los Angeles, Cal.—A mortgage has been filed by the Pacific Electric Railway to the United States Mortgage & Trust Company, New York, N. Y., as trustee, to secure an issue of $100,000,000 of fifty-year gold mortgage bonds to retire outstanding issues and provide funds to carry out the important extensions and developments which the company has in contemplation. Of the bond issue $39,693,000 will be held as a fund out of which to redeem outstanding bonds of the various companies recently merged into the Pacific Electric Railway as they mature. This amount is apportioned among the subsidiary companies in the following amounts for which bonds have been previously issued by them: Los Angeles & Pasadena Electric Railway, $1,000,000; Pacific Electric Railway (old company), $8,494,000; Pasadena & Mount Lowe Railway, $500,000; Los Angeles Interurban Railway, $9,020,000; Los Angeles & Redlands Railway, $8,947,000; California Pacific Railway, $480,000; Riverside & Arlington Railway, $200,000; San Bernardino Traction Company, $877,000; Redlands Street Railway, $187,000; Los Angeles Pacific Railroad, $10,930,000; Los Angeles, Hermosa Beach & Redondo Railway, $74,000.

San Antonio (Tex.) Traction Company.—The San Antonio Traction Company has increased its capital stock from $1,000,000 to $1,210,000.

Williamsport (Pa.) Passenger Railway.—E. H. Davis, manager Williamsport Passenger Railway, states that no action has been taken by his company looking to the purchase of the Montoursville Passenger Railway, bonds of which amounting to $31,000 have been offered for sale as part of the assets of the National Protective Association, whose affairs are now being investigated.

Winnipeg (Man.) Electric Company.—The shareholders of the Winnipeg Electric Company will receive $3,000,000 stock at par as a result of the annual meeting held in Winnipeg. The announcement was made that the profits of the year were $900,000 and that $420,000 would be placed to the credit of profit and loss.

Dividends Declared

Brockton & Plymouth (Mass.) Street Railway Company, semi-annual, $3 per share, preferred.

Chippewa Valley Railway, Light & Power Company, annual, 7 per cent, common.

Columbus (Ohio) Railway Company, quarterly, 1¼ per cent, common.

Mobile (Ala.) Electric Company, quarterly, 1¾ per cent, preferred.

ELECTRIC RAILWAY MONTHLY EARNINGS

AMERICAN RAILWAYS, PHILADELPHIA, PA.

Period.			Gross Revenue.	Operating Expenses.	Net Revenue.	Fixed Charges.	Net Income.
1 m.,	Jan.	'12	$373,511	.....	.....	.....	.....
1 "	"	'11	351,274	.....	.....	.....	.....
6 "	"	'11	2,844,817	.....	.....	.....	.....
6 "	"	'10	2,687,042	.....	.....	.....	.....

DETROIT UNITED RAILWAY

1 m.,	Dec	'11	$913,503	$570,325	$343,178	$180,138	$163,040
1 "	"	'10	779,973	494,278	285,696	166,761	118,935
12 "	"	'11	10,431,947	6,580,042	3,851,905	2,123,398	1,728,507
12 "	"	'10	9,497,987	5,981,065	3,516,922	2,030,623	1,486,300

EAST ST. LOUIS & SUBURBAN RAILWAY

1 m.,	Jan.	'12	$152,264	$72,382	$79,883	.....	.....
1 "	"	'11	148,845	68,578	80,268	.....	.....

AURORA, ELGIN & CHICAGO RAILROAD

1 m.,	Jan.	'12	$125,717	$81,615	$44,102	$36,935	$7,167
1 "	"	'11	121,196	89,492	31,704	35,019	3,315
7 "	"	'12	1,108,662	609,838	498,824	256,469	242,356
7 "	"	'11	1,055,653	593,327	462,326	236,912	225,415

TOLEDO RAILWAYS & LIGHT COMPANY

12 m.,	Dec.	'11	$3,399,372	*$2,384,838	$1,014,534	$820,424	$194,110
12 "	"	'10	2,985,232	*1,868,450	1,116,782	926,381	190,401

WEST PENN TRACTION COMPANY

12 m.,	Dec.	'11	$2,260,287	*$1,112,281	$1,148,005	$665,776	$482,230
12 "	"	'10	2,107,002	*987,642	1,119,360	673,004	446,356

*Includes taxes.

Traffic and Transportation

Electric Freight and Express Policy Outlined for Los Angeles.

A definite policy that will permit the Pacific Electric Company, under proper restrictions and conditions, to carry express and freight through certain city streets and thus serve neighboring communities as well as Los Angeles was outlined and approved at a conference between the Board of Public Utilities and representatives of local civic and commercial bodies on Feb. 9. It is believed that the conclusions reached will materially relieve traffic congestion on the downtown streets and not hamper the railway company in performing a valuable commercial service for the outside communities.

The Utilities Board decided as follows:

That no freight shall be permitted to be carried by any electric railway on Main street between Sixth Street and First Street, the heart of the congested traffic district.

That the Pacific Electric Company shall have a franchise or permit to carry small packages and express matter over all its lines within Los Angeles.

That this permit shall be revocable at any time; that such express packages shall be carried, not in two-car or three-car trains, but in one car, conforming to the passenger car, and not to be operated after 11 o'clock p. m. nor before 5 o'clock a. m.

That this express-car service shall not be operated by the company during the congested hours of the day.

That no permanent freight-carrying franchise or permit shall be granted the Pacific Electric Company along streets in the retail district.

That permanent freight-carrying privileges shall be confined to lines in the industrial district only, from which spur track privileges may be had by merchants, subject to switching hours.

That the life of these permanent freight-carrying privileges shall be the same as the remaining life of franchises now held by the company and over which lines freight is to carried.

That a temporary freight-carrying permit be granted the company for the Glendale line from Sixth and Los Angeles Streets, west on Sixth Street to the city limits. With reference to this latter temporary permit it is proposed that freight shall be hauled by not more than two cars and a motor car and that the freight cars shall be operated between 5 a. m. and 7 a. m. and between 8 p. m. and 11 p. m. In recommending this privilege on Sixth Street the board proposes to give the railway company sufficient time to find another route for serving the Glendale district.

Rules for Transporting Dogs in Denver

The following regulations in regard to the transportation of dogs over the lines of the Denver (Col.) City Tramway went into effect on Jan. 12, 1912:

"Conductor will collect 10 cents for each dog carried upon the cars, regardless of size, registering same as two 5-cent cash fares.

"Small dogs that are carried in the arms of passengers, and held in the laps of passengers, need not be muzzled when taken upon the cars. All other dogs allowed upon the cars must be muzzled, and must be held by the person in charge of them by a chain or strap and taken to the rear end of car.

"Under no other conditions will conductor allow dogs to remain upon the car.

"Dogs must not be allowed upon car seats.

"Transfers will not be issued for dogs.

"No passenger will be permitted to carry more than two dogs.

"Conductor will not permit a vicious dog, or one that shows evidence of disease, to be carried upon car.

"Should passenger refuse to pay fare for dog, conductor will not eject passenger or decline to take his fare. Conductor, will, however, refuse to permit the dog to remain on the car, and, if necessary, put the dog off the car. If passenger desires to alight on account of conductor's refusal to carry the dog, conductor will stop the car for such purpose, and return the passenger's fare, if the same has been collected.

"Conductor will make note in the free column of his trip sheet showing number of dogs carried. For example: '2 D.'"

Wage Increase in Ottawa.—A general and voluntary increase of the wages of motormen and conductors on the Ottawa Street Railway, to take effect from Jan. 1 last, has been granted. It will amount to 1 cent an hour extra for all classes, and affect 450 men.

New Orleans Historical Booklets.—The New Orleans Railway & Light Company has issued a pamphlet of unusual artistic merit. It deals with an old legend of Spanish Fort about a romance between an Indian girl and one of the Spanish explorers, and the story is most interestingly told. Illustrations of scenes in the locality reached by electric railway add to the interest in the legend and bring before the reader a real conception of the natural beauty of the country around Lake Pontchartrain.

Favorable Train Movement Record on Rochester, Syracuse & Eastern Railroad.—The passenger detention report for January issued by P. E. Emerson, superintendent of transportation for the Rochester, Syracuse & Eastern Railroad, shows that of the 4,843 trains operated on that line during January there were 92.8 per cent on time or not to exceed five minutes late at final destination. The average delay of the 7.2 per cent that were late was 14.7 min. Heavy travel accounted for more than one-fourth of all the delays.

Blockade Photograph Offer in New Orleans.—The New Orleans Railway & Light Company, because of the narrowness of the streets in the older portions of the city, suffers considerable delay to its cars by reason of blockades from team traffic. In order to have evidence which may be of use to the railway in event of criticism of the service, the company has a standing offer for the first photograph received of any blockade. These photographs form an interesting file, and before being indexed each is attached to a memorandum of the circumstances surrounding the blockade or other interference with car traffic.

Request for Prorating with Steam Railroads.—Alden Anderson, president of the Central California Traction Company, is filing with the State Railroad Commission a complaint praying for an order compelling non-competitive steam roads to prorate with electric interurban roads on passenger and freight business. The traction line operates between Sacramento and Stockton, via Lodi, and the effect of such an order would be the virtual entry of the Santa Fé into competition with the Southern Pacific and Western Pacific in Sacramento, for through rates would be compulsory to and from Sacramento over the Santa Fé and the traction line.

Monthly School Commutation Tickets.—The Public Service Commission of the Second District of New York has ordered the Elmira, Corning & Waverly Railway to put in force monthly school commutation tickets between Holbert's Crossing and Waverly for children attending school in Waverly, the commutation tickets to be limited to cars arriving in Waverly between 8 a. m. and 9 a. m., and returning from Waverly between 3 p. m. and 5 p. m., and to cover forty-six rides for a fare not exceeding 5 cents per ride. The present fare between these points is 10 cents. The commutation rates are ordered to be put in force on or before Feb. 15, 1912.

Ordinance Limiting Number of Passengers on Cars Held to Be Valid.—The Court of Appeals at Frankfort, Ky., has affirmed the judgment of the Kenton Circuit Court in the case of the South Covington & Cincinnati Railway against the city of Covington, Ky. This suit was instituted to test the validity of an ordinance limiting the number of passengers to one-third more than the seating capacity of the car. The lower court held the ordinance valid. In affirming the decision the Court of Appeals says that street railways must provide an ample number of cars to take care of the traveling public and that the charters of second-class cities give them the power to control by ordinance the operation of street cars.

Wage Increase by Mahoning & Shenango Railway & Light Company, Youngstown, Ohio.—All carmen will re-

ceive an increase in pay, to begin on April 1. The increase will make the wage scale 26 cents, 27 cents and 28 cents per hour, according to the length of time the men have been employed by the company. The provision for this increase in wages was made at a conference held two years ago when the wage question was adjusted for three years. At that time an increase of 2 cents per hour was granted to the men, with an increase of an additional cent per hour for the two succeeding years, so that an increase of 4 cents per hour was secured in the three years. The men have already received the increase for the first two years under the contract.

Increase in Wages by Columbia & Montour Electric Railway.—The Columbia & Montour Electric Railway, Bloomsburg, Pa., has announced an increase in the wages of its motormen and conductors. The schedule follows: First six months, 15 cents an hour; second six months, 16 cents; second year, 16 cents; third year, 17½ cents; fourth year 17½ cents; fifth year and over 18½ cents. Under the former scale the motormen and conductors received 15 cents an hour the first six months, 16 cents an hour the second six months and during the second and third year, with a gradual increase to 17½ cents an hour. The company has also decided to present to each motorman or conductor a gold star for each five years' continuous service with the company, the stars to be worn on the left sleeve.

Department to Develop Territory Near New Albany.—The Louisville & Southern Indiana Traction Company and the Louisville & Northern Railway & Lighting Company, New Albany, Ind., have organized a department to cooperate with the business men, commercial clubs and other organizations in the development of the territory in Indiana opposite Louisville. The services of this department are given free to those who want information in regard to homes, farms, truck gardens, fruit orchards, chicken farms or manufacturing sites in or around New Albany, Jeffersonville, Sellersburg, Charlestown, or any point in Southern Indiana within 20 miles of Louisville. In addition, this department endeavors to induce people to settle in the territory referred to and is ready to help to promote any meritorious project that will redound to the advantage and the development of the territory.

Brooklyn-Jamaica Transfer Decision.—The Court of Appeals at Albany on Feb. 13 held that the Brooklyn, Queens County & Suburban Railroad, a subsidiary of the Brooklyn Rapid Transit System, is not required to give a transfer for 5 cents for a continuous ride over its line from Brooklyn to Jamaica. The court answers in the negative the question whether the consolidation of adjacent places into Greater New York imposed on surface railway companies the obligation of carrying a passenger for a single fare over a route embracing adjoining territories within the greater city. It holds also that the consolidation of two roads serving the territory in question "did not impose on the new corporation the obligation to transfer over the combined lines of both for a single fare." The section of the railroad law, it is stated, did not have "in contemplation such a vast and radical change in existing conditions as was caused by the creation of the new city."

Indiana Accident Bulletin.—The eighteenth accident bulletin just issued by the Indiana Railroad Commission for the fourth quarter of 1911 shows that no passengers were killed and that forty-four were injured on the interurban lines of the State. This increase of injured passengers over the corresponding quarter for 1910 is charged to a derailment on an Indiana Union Traction car in Anderson which resulted in personal injuries to thirty-three passengers. During the fourth quarter the interurbans killed two persons on public highways and the same number for the same quarter in 1910. There were four trespassers killed during the fourth quarter of 1911, against seven for the same quarter in 1910. There were ten persons injured at highway crossings and two deaths in vehicles and two on foot, an increase of three over the same quarter of 1910. Six employees were injured, against fifteen for the corresponding quarter of 1910. The total number of casualties on the interurban railways for the quarter ended Dec. 31, 1911, was as follows: Deaths, nine; injured, sixty-two; for the corresponding quarter of 1910: deaths, eleven; injured, fifty-nine.

A Statement of Policy.—The Hagerstown (Md.) Railway, the reorganization of which was noted in the ELECTRIC RAILWAY JOURNAL of Feb. 10, 1912, page 255, has issued over the signature of Henry Holzapfel, Jr., president, a statement of policy in part as follows: "We feel that it is proper to make a plain, frank statement of just what we intend to do for the community, and of course, ask of the people their hearty co-operation in the improvements we intend to make and their forbearance and consideration until such work can be accomplished. To correct properly, carefully and efficiently the difficulties arising from lack of power will require some little time, during which period it is the purpose of the management to give the very best possible service, but not in any sense the accommodation and convenience that the entire new equipment will offer. Our first effort will be to make everything most substantial and satisfactory; to show beyond any question our desire to give the fullest value for the people's money. We want everyone to feel that he has an interest in the management of this public work and any suggestions will be welcomed and promptly looked after. Give us your hearty, earnest co-operation; we will do our part."

Orders to Conductors on Long Island Railroad.—The superintendent of the Long Island Railroad has just issued an order requiring conductors, trainmen and station agents to make every effort to ascertain the cause of any sudden interruption of train service and answer freely and courteously all questions addressed to them upon this subject by passengers or those about to travel. The order reads in part as follows: "This company feels that its patrons should be informed of any interruption of traffic or extraordinary delays to trains upon which they may be traveling or about to travel. In many instances information of this character is of great value to our patrons and frequently will enable them to change their arrangements and lessen the inconvenience to which they would otherwise be subjected. It may not always be possible for conductors and trainmen to find out exactly the cause of the trouble or the extent of the delay. In such instances they will only be expected to do the best they can. The chief train dispatcher at Long Island City will endeavor to get in touch with the situation and will aid the efforts of conductors by giving them proper information, which in turn should be given to passengers. Station agents will also endeavor to find out why trains are late and see that prospective passengers waiting at the stations are properly advised. The dispatcher's office will also try to get in touch with the agents and assist them in ascertaining the cause and extent of the trouble."

Suggestions Solicited in Brooklyn.—The following notice was addressed, under date of Feb. 6, 1912, to the patrons of the operating companies included in the Brooklyn (N. Y.) Rapid Transit System: "The co-operation which you have in the past accorded us in the shape of suggestions has aided our endeavors to better the conditions of our service, and we desire at this time to thank all who have rendered such valuable assistance. It is our constant effort to give good service, to maintain an efficient and courteous corps of employees, and to avoid all reasonable grounds for complaint. Obedience and the enforcement of consistent regulations, honesty and frankness, alertness, and especially courtesy, are but some of the requirements of the individual employee to whose care the traveling public is intrusted. We wish to comply with practicable requests or suggestions that will promote the comfort and convenience of our passengers. It has always been our policy to encourage a closer relation between the public and the company, to investigate every complaint and to welcome suggestions or criticisms tending to improve the service. The operations of a street railway are necessarily intricate and not always easily explained by letter. To any of our patrons, therefore, who may find it convenient to call in person we assure a courteous hearing and a full explanation. We, therefore, beg leave to state that all matters of this character are handled direct from the office of our vice-president and general manager at 85 Clinton Street, Brooklyn, N. Y., and any communication will, as heretofore, receive prompt attention." This notice has been reproduced on placards which have been hung in a conspicuous place in the cars of the company.

Personal Mention

Mr. Louis Richards has been appointed superintendent of the Cumberland Railway, Carlisle, Pa.

Mr. O. M. Rau, who resigned recently as chief electrician of The Milwaukee Electric Railway & Light Company, has been appointed general manager of the Commonwealth Power Company Milwaukee.

Mr. H. L. Harding, assistant treasurer of the Houston Electric Company, has been appointed acting assistant treasurer of the Galveston Electric Company, owing to the death of A. Drouilhet.

Mr. H. W. Clapp, engineer in charge of construction of the transbay electric lines of the Southern Pacific Company, has been appointed assistant electrical engineer under A. H. Babcock, electrical engineer of the company.

Mr. William W. S. Butler, formerly general manager and engineer of the Newport News & Old Point Railway & Electric Company, and more recently vice-president of the Western States Gas & Electric Company, Stockton, Cal., has been made general manager of the latter company, to succeed Mr. H. E. Adams, resigned.

Mr. Frank C. Wilkinson, whose resignation as general superintendent of the Lynn division of the Bay State Street Railway, Boston, Mass., was noted in the Electric Railway Journal of Jan. 13, 1912, had a reception tendered to him by the employees of the company on Feb. 2. Mr. Wilkinson was made the recipient of a fine testimonial in the form of a purse containing $460 as a token of their esteem.

Mr. E. P. Chalfant, formerly president of the E. R. Thomas Motor Car Company, has been elected president and director of the Springfield (Mo.) Railway & Light Company, president and director of the Sharon & New Castle Street Railway, Sharon, Pa., and director of the Youngstown-Sharon Railway & Light Company. Mr. Chalfant will become associated with Mr. Harrison Williams, New York, in the financing of public utility companies.

Mr. W. J. Harvie, chief engineer of the Syracuse Rapid Transit Railway, Utica & Mohawk Valley Railway and Oneida Railway, has been appointed railway manager of the operating department of the J. G. White Company, New York. In this position he will succeed Mr. J. N. Shannahan, who resigned recently to accept the position of vice-president and general manager of the Newport News & Old Point Railway & Electric Company. Mr. Harvie has been very active in both state and national electric railway association work, having served on various committees since his connection with these properties. He was president of the American Electric Railway Engineering Association last year and was acting president for ten months of the preceding year. A biography of Mr. Harvie was published in the issue of this paper for Oct. 22, 1910.

Mr. William Stewart, whose election as secretary and treasurer of the Newport News & Old Point Railway & Electric Company, Hampton, Va., was announced in the Electric Railway Journal of Feb. 3, 1912, was connected with the New York Central & Hudson River Railroad from 1899 to 1901 as chief clerk of the signal department and in the maintenance of way department of the company under Mr. J. C. Irwin at Albany, N. Y. From 1901 to 1907 Mr. Stewart was purchasing agent and secretary to Mr. J. N. Shannahan, who at that time was general manager of the Fonda, Johnstown & Gloversville Railroad. From 1907 to Jan. 12, 1912, when he assumed his duties with the Newport News & Old Point Railway & Electric Company, Mr. Stewart was purchasing agent and secretary to the general manager of the Washington, Baltimore & Annapolis Electric Railway, Baltimore, Md.

Mr. Charles J. Griffith has been elected general manager of the Little Rock Railway & Electric Company, Little Rock, Ark. Mr. Griffith was appointed general superintendent and treasurer of the company in August, 1911, to succeed Mr. D. A. Hegarty in charge of operation. Mr. Griffith has been superintendent of the railway department of the company since 1905. He entered the employ of the Little Rock Traction & Electric Company in 1892 as master mechanic, and remained in that position until 1897, when he became general superintendent of the Southern Engineering Company, installing electric light plants and water works. He re-entered the service of the Little Rock Railway & Electric Company in 1901 as master mechanic and continued in that position until he was promoted to superintendent of the railway department, which position he held until August, 1911.

Mr. Edward G. Riggs, of Brooklyn, N. Y., has been nominated by Governor John A. Dix as a member of the Public Service Commission of the First District to succeed Mr. William McCarroll, whose term of office has expired. The nomination has been sent to the Senate for confirmation. Mr. Riggs was born in New York fifty-five years ago. He has lived in Brooklyn since he was five years old and was educated in the Brooklyn public schools, at board schools and by private tutors. Thirty-five years ago he became a writer on financial and commercial topics for the New York *World* and at the same time wrote for the *Financial Chronicle*. He has been a political writer for the New York *Sun* since 1885. Mr. Riggs has contributed articles on political and financial matters to magazines and is familiar with the transportation problems of New York City. He is a member of the Lotos, Manhattan, Barnard and Oakland clubs.

Mr. Herbert P. Bissell, of East Aurora, N. Y., has been named by Governor John A. Dix as a member of the Public Service Commission of the Second District to succeed Mr. John B. Olmsted, of Buffalo, whose term of office has expired. The nomination of Mr. Bissell has been sent to the Senate for confirmation. Herbert P. Bissell was born in New London, Oneida County, in 1856. He was educated at Devaux College, in Germany and at Harvard, where he was graduated in 1880. He practised law from 1882 to 1896 as a member of the firm of Bissell, Sicard, Bissell & Carey, of Buffalo. In 1901 he was Democratic candidate for Mayor of Buffalo. He has been president of the Board of Education of East Aurora and a trustee of Devaux College. He was appointed to the State Commission in Lunacy by Governor Dix on May 9, 1911. He is a member of the State Bar Association and the Sons of the American Revolution and of the University, Elliott and Transportation clubs of Buffalo.

OBITUARY

William Wilkes Young, purchasing agent of the Union Switch & Signal Company, Swissvale, Pa., is dead.

F. H. Strieby, of the Cincinnati office of the General Electric Company, died Feb. 18 after a few days' illness. Mr. Strieby was one of the pioneers in electric work and installed several of the early street railway systems in this country.

Francis H. Stillman, president of the Watson-Stillman Company, New York, died Feb. 18 of intestinal hemorrhage. He was born in 1850 and he organized and became president of the firm of Watson & Stillman in 1883. The firm was incorporated in 1904. Mr. Stillman was a member of the American Society of Mechanical Engineers and continuously through its existence a director of the National Association of Manufacturers. He was also first president of the Machinery Club of New York and first president of the National Metal Trades Association.

Lee D. Fisher, right-of-way agent for the Public Service Company of Northern Illinois, Streator, Ill., died at his home in Joliet on Feb. 8, 1912. Mr. Fisher was born in Elyria, Ohio, in 1875, but was educated in St. Louis, graduating from the electrical and mechanical engineering courses of Washington University in 1897. He was chief engineer of the transport *Buffalo* during the Spanish-American War and the subsequent operations in the Philippines. In 1900 Mr. Fisher engaged in electric railway construction as engineer in charge of the building of three lines at Columbus, Ohio. In 1903 he aided in building the Joliet, Plainfield & Aurora Interurban Railway and the Joliet & Southern Traction Company's line. He became treasurer and chief engineer of the company last mentioned, of which his father, Mr. H. A. Fisher, is president. He made his home in Joliet for several years, and a few months ago accepted the position of right-of-way agent with the Public Service Company of Northern Illinois, an important position, in view of the expanding operations of that company. Mr. Fisher is survived by a widow and two children.

Construction News

Construction News Notes are classified under each heading alphabetically by States.

An asterisk (*) indicates a project not previously reported.

RECENT INCORPORATIONS

***Bassano Electric Railway, Edmonton, Alta.**—Chartered in Alberta to build a 40-mile electric railway. Capital stock, $250,000. Incorporators: S. E. Whitney, Charles Harris, Frank Murcheson, Z. C. Ingram and William Robinson.

***Mahar Electric Railway, Edmonton, Alta.**—Incorporated to build an electric railway in Alberta. Capital stock, $250,000. Incorporators: C. A. Owens, G. O'Grady, Joseph Ruse, E. M. Adams and F. U. Phillips, all of Calgary, Alberta.

***Chicago & Interurban Traction Company, Chicago, Ill.**—Incorporated in Illinois to build an interurban railway from Kankakee to Chicago. Capital stock, $1,000,000. The incorporators and first board of directors are: Warner H. Robisson, Charles R. Moore, Edgar H. Pank, William W. Crawford and Charles H. Ireland, all of Chicago.

***Kentucky-Tennessee Traction Company, Hopkinsville, Ky.**—Incorporated in Delaware to build an electric railway from Evansville, Ind., to Nashville, Tenn., connecting the Ohio and Cumberland River Valleys. The line will extend through numerous points in Kentucky and Tennessee, touching Hopkinsville, Ky., and Guthrie, Tenn. Work will be begun at once upon the Hopkinsville-Guthrie section. Capital stock, $1,000,000; common stock, $400,000; preferred stock, $600,000. Officers: Nathan Gaithers, Hopkinsville, president; J. W. Cross, Hopkinsville, vice-president; H. A. Keach, Hopkinsville, secretary, and A. H. Eckles, Hopkinsville, treasurer. [E. R. J., Oct. 28, '11.]

Mid-Crosstown Railway, Albany, N. Y.—Chartered in New York as a reorganization of the Twenty-eighth & Twenty-ninth Streets Crosstown Railroad. Capital stock, $500,000. Directors: John W. Hanner, Horace A. Doan, Charles E. Lexley and A. Merritt Taylor, Philadelphia, Pa.; W. C. Heppenheimer, Jersey City, N. J.; Abraham S. Gilbert and Cornelius R. Wright, New York.

***One Hundred & Forty-fifth Street Crosstown Railroad, New York, N. Y.**—Incorporated in New York by the Interborough Rapid Transit Company's interests to operate a surface railroad in One Hundred and Forty-fifth Street, from Lenox Avenue to Broadway. Capital stock, $200,000. The directors are: H. M. Fisher, E. F. J. Gaynor, George Keegan, D. J. Pepperman, W. L. Pepperman, David W. Ross, Frederick T. Wood, Frank Hedley and Arthur C. Wigren.

***Pittsburgh & Cincinnati Traction Company, Cincinnati, Ohio.**—Incorporated in Delaware to build an electric railway between Cincinnati, Ohio, and Pittsburgh, Pa., through fourteen counties in Ohio and two in Pennsylvania. Negotiations for the right-of-way have been closed and construction will be begun at once. Capital stock, $100,000,000. A. O. Kirschner, Cincinnati, Ohio, is interested.

***Greenville & Whitewright Northern Traction Company, Whitewright, Tex.**—Incorporated in Texas to build an electric interurban railway from Greenville to Whitewright, via Merritt, Blue Ridge and Westminster. Capital stock, $210,000. Incorporators: A. R. Nicholson, J. W. Castelberry, H. A. Barsun, A. W. Defee, J. E. Morris and W. H. James, Greenville, and S. M. Dickens, Merritt.

Duchesse Construction Company, Provo, Utah.—Incorporated in Utah to build a 12-mile electric railway between Provo, Springville and Spanish Fork. Work will be begun in the spring. Capital stock authorized, $25,000. Officers: Samuel H. Wood, Provo, president, treasurer and general manager; H. H. Wood, Salt Lake City, vice-president, and S. G. Pollock, Provo, secretary. [E. R. J., Feb. 17, '12.]

FRANCHISES

Colusa, Cal.—The West Side Electric Railroad, San Francisco, has asked the Board of Supervisors for a franchise through Colusa County. H. W. Furlong, president. [E. R. J., Oct. 7, '11.]

***Corning, Cal.**—F. H. Risley, representing the Monorail Company, has received a franchise from the Board of Trustees to extend its line through Corning on Butte Street to the Southern Pacific Railway's right-of-way, a distance of 1 mile. This line will be extended to Paskenta, a distance of 27 miles.

Rome, Ga.—The Chattanooga, Rome & Atlanta Railway, Chattanooga, will ask the City Council for a franchise in Rome. The line will be built to Rome, via Rossville, Chickamauga National Park, Lafayette, Trion and Summerville. [E. R. J., Feb. 17, '12.]

Rome, Ga.—The Rome Railway & Light Company has asked the City Council for a franchise to extend its line in East Rome from the present terminus at the Southern Railway depot out through Maple Street.

Indianapolis, Ind.—The Indianapolis, Chicago & Meridian Railway will ask the City Council for a franchise in Indianapolis. Elmer J. Binford, Greenfield, president. [E. R. J., Dec. 30, '11.]

Mt. Clemens, Mich.—A. E. Riopelle, Detroit, representing the Thumb Survey Company, has asked the Council for a franchise for an electric railway through Mt. Clemens, Mich. The line is to extend from Detroit to Bad Axe. [E. R. J., Dec. 16, '11.]

***Muskegon, Mich.**—The County Supervisors have been asked by a syndicate for a franchise for an electric railway in Muskegon.

Hibbing, Minn.—The Mesaba Electric Railway, Duluth, has received a twenty-five-year franchise from the Council in Hibbing. The line will connect Gilbert, Eveleth, Hibbing, Chisholm, Buhl and Virginia. Oscar Mitchell, Duluth, president. [E. R. J., Feb. 17, '12.]

Albany, N. Y.—The United Traction Company will ask the Common Council for a franchise to extend its Broadway and Third Street lines in Albany.

Newbern, N. C.—The Board of Aldermen has granted a franchise to Fritz Sitterding, J. W. Brown, Jr., and E. C. Armstrong for a street railway in Newbern.

Galt, Ont.—The Galt, Preston & Hespeler Street Railway has renewed its franchise in Galt for ten years.

Ottawa, Ont.—The Ontario & Ottawa Railway has secured permission to build an electric railway from Orillia to Renfrew, Hull and Ottawa.

Bentleyville, Pa.—The West Side Electric Street Railway, Charleroi, has received a franchise from the Borough Council in Bentleyville. No date has been set for actual construction.

Mercersburg, Pa.—The Hagerstown & Clearspring Railway, Hagerstown, has received franchises in Peters and Montgomery townships.

New Castle, Pa.—The Beaver, Koppel & New Castle Railway has received a forty-year franchise from the Common Council in New Castle. It will connect New Castle, Hillsville, Poland and Youngstown. C. E. Glenn, New Castle, president. [E. R. J., Feb. 3, '12.]

Wilkes-Barre, Pa.—The Wilkes-Barre Railway has received a franchise from the Common Council to extend and double track several of its lines in Wilkes-Barre.

Greenville, Tex.—Joseph F. Nichols, Greenville, and associates have asked the County Commissioners for a franchise across and along certain highways in Hunt county. [E. R. J., Jan. 13, '12.]

Spokane, Wash.—The Spokane Traction Company has received six months' extension of time on its franchises in which to complete its two lines in Spokane. One is the extension of its cable addition line to Thirty-third Avenue and Division Street and the other is the extension of its Post Street line to the north city limits.

White Salmon, Wash.—The Mount Adams Railway has asked the Council for a franchise in White Salmon.

TRACK AND ROADWAY

Mobile Light & Railroad Company, Mobile, Ala.—Surveys will be begun at once by C. C. Mechem for this company on its extension from the terminus at Spring Hill to Pinehurst, a distance of 2 miles.

Calgary (Alta) Street Railway.—Surveyors are preparing the route for this company's extension to the Canadian Pacific Railway Company's shops site, east of the Bow River, and work will be started in the near future.

Edmonton (Alta.) Radial Railway.—This company plans to build 5.09 miles of new track during the year.

Burlingame, Cal.—Preliminary arrangements have been made and construction will be begun within the next month on the electric railway from North Burlingame through the Easton subdivisions to a point between Lake Pilarcitos and Lake San Andreas.

Fresno (Cal.) Traction Company.—Surveys are being made and construction will soon be begun by this company on the extension of the Olive Avenue line to Roeding Park and Mountain View Cemetery.

Pacific Electric Railway, Los Angeles, Cal.—Work has been begun by this company on the Washington Street extension to the Nazarene University.

San Francisco, Napa & Calistoga Railway, Napa, Cal.—This company expects to begin work on an extension between St. Helena and Calistoga and will let contract for grading within the next two weeks. The contracts for all the material have been let and delivery will be made within thirty days. This construction will include a reinforced concrete bridge across the Napa River between St. Helena and Calistoga and will cost approximately $10,000. The company is now building additional track facilities at its terminal in Vallejo.

St. John's Light & Power Company, St. Augustine, Fla.—Plans are being considered by this company to build an extension to New Augustine across the Causeway.

Chicago (Ill.) City Railway.—This company will construct 15 miles of new track in 1912.

Johnston City Connecting Railway, Johnston City, Ill.—This company advises that this line will be operated by steam and not by electricity, as stated in the Electric Railway Journal of Dec. 16, 1911.

Moline, East Moline & Watertown Railway, Moline, Ill.—This company plans to build an extension of its Silvis branch to the center of Carbon Cliff village in the near future.

Traction Light & Power Company, Anderson, Ind.—This company, recently incorporated to take over the business now being done by the Indiana Union Traction Company, has elected the following officers: James A. Van Osdol, president; Calvin H. Allen, vice-president; William H. Forse, secretary and treasurer; H. A. Nicholl, general manager, and Guy H. Kelsey, superintendent, all of Anderson. [E. R. J., Feb. 3, '12.]

Indianapolis, Chicago & Meridian Railway, Indianapolis, Ind.—This company has awarded the contract for the construction of the northern end of its line to William Love, Indianapolis. Work will be begun at Valparaiso within the next few weeks. It will connect Indianapolis, Sheridan, Gary, Valparaiso, Hammond, Monticello and Warsaw. It is reported that financial backing has been secured and that the company will increase its capital stock from $100,000 to $6,000,000. Elmer J. Binford, Greenfield, president. [E. R. J., Dec. 30, '11.]

Indianapolis, New Castle & Toledo Electric Railway, Indianapolis, Ind.—Right-of-way has been obtained and financial backing has been secured by this company for its extension between New Castle and Muncie.

Terre Haute, Ind.—It is reported that plans are being made to build a 140-mile electric railway between Terre Haute and St. Louis. Application for a franchise will soon be made. A number of contracts for right-of-way have been secured. The line will occupy the territory between the Vandalia Railroad and the Baltimore & Ohio Railroad. J. W. Ratcliff, Terre Haute, is said to be interested. [E. R. J., Dec. 30, '11.]

Nebraska Northwestern Railway, Davenport, Ia.—This company advises that it is in the market for 3,000 tons of original 60-lb. relaying rails and connections; 75,000 standard ties and quantity of bridge material, including piling. O. L. Brower, 603 Putnam Building, Davenport, president.

Manhattan City & Interurban Railway, Manhattan, Kan.—During 1912 this company plans to construct 17 miles of new track.

***Salina, Tipton & Northern Railway, Salina, Kan.**—This company has been formed to build an interurban railway between Salina and Osborne, via Penn, Hancock, Bloom, Pittsburg and Custer. These towns have voted bonds for the construction of the proposed line.

Kentucky Southwestern Railway, Light & Power Company, Hickman, Ky.—The report of W. A. Calhoun, of this company, which proposes to construct an electric railway from Metropolis, Ill., to Paducah and Hickman, Ky., has been completed and placed in the hands of President Rhodes for consideration. Chief Engineer Calhoun has completed a survey for the line, which will extend through eleven counties and serve more than fifty cities and towns. The line is to be 210 miles long. [E. R. J., Feb. 10, '12.]

Taylorsville, Ky.—A corporation is now being formed at Taylorsville for the purpose of financing the survey of an electric railway from Taylorsville to Jeffersontown, Ky., a few miles east of Louisville. [E. R. J., Feb. 17, '12.]

Southwestern Traction & Power Company, New Orleans, La.—This company plans to build an extension from New Iberia to Abbeville, and possibly to Lake Arthur and Lake Charles.

Shreveport (La.) Traction Company.—Contracts have been signed by this company to build an extension to Cedar Grove, via Fairfield Heights and Caddo Heights.

Winnipeg (Man.) Electric Railway.—This company plans to build an extension between Winnipeg and Selkirk to Stony Mountain and Stonewall, and eventually to Portage la Prairie.

Bay State Street Railway, Boston, Mass.—This company has been asked to consider plans to extend its Mt. Washington line from its present terminus at Maxwell Street to Lowell Avenue, Carleton Street, Monument Street to connect with the Hilldale Avenue line at its terminus, thereby making a complete belt line. The distance between the ends of the two lines is about 2 miles.

Boston & Providence Interurban Electric Railroad, Boston, Mass.—Plans are being considered by this company to extend its lines to New Bedford.

Michigan United Railways, Jackson, Mich.—Work has been begun by this company on the extension from Owosso to Flint, via Flushing.

Sault Sainte Marie, Mich.—Arrangements have been made whereby the interurban line from Sault Sainte Marie to the Snow Islands will be built this summer. The terminal of the route will be Island No. 8, and a car ferry will be operated from that point 22 miles across Lake Huron to Cheboygan. Gasoline electric cars will be used. [E. R. J., Feb. 17, '12.]

Inter-State Traction Company, Duluth, Minn.—During the next few months this company will award contracts to rebuild over 3 miles of track with new rails and ties.

Hattiesburg (Miss.) Traction Company.—This company plans to build several extensions in Hattiesburg in the near future.

Morris County Traction Company, Morristown, N. J.—This company has placed in operation its new line between Newark and Madison, Chatham and Summit.

Ocean City (N. J.) Electric Railroad.—During 1912 this company will build half a mile of new track in Ocean City.

***Buffalo & Fort Erie Ferry & Railway Company, Buffalo, N. Y.**—This company, which now operates 4 miles of steam road, has submitted a proposition to the Niagara, St. Catharines & Toronto Electric Railway, St. Catharines, Ont., in connection with the extension of the line from Port Colborne to Crystal Beach and Fort Erie Beach. The ferry company proposes to build a new ferry terminal at Fort Erie Beach at a cost of $300,000, and double track the road from Fort Erie to beyond the Beach and erect new terminals. The Niagara, St. Catharines & Toronto Electric Railway would operate its cars over the ferry company's right-of-way under traffic arrangements. F. J. Weber, Buffalo, N. Y., president.

New York (N. Y.) Interborough Railway.—This company plans to build 6 miles of new track during the year.

Piedmont & Northern Railway, Charlotte, N. C.—Track laying has been begun by this company on the Greenwood-Belton section of its line.

North Carolina Public Service Company, Greensboro, N. C.—This company will build 1 mile of new track in 1912.

Neuse-Trent Traction Company, Newbern, N. C.—Work will soon be begun by this company on its 4-mile line between Newbern and Trenton. The company plans to use Edison storage battery cars. Norman T. Boggs, Newbern, president. [E. R. J., Dec. 17, '10.]

Tidewater Power Company, Wilmington, N. C.—About 3 miles of double track will be built by this company during the year.

Lake Shore Electric Railway, Cleveland, Ohio.—This company has made arrangements to change the course of its line between Huron, Ohio, and Rye Beach in such a manner as to shorten the distance and cut the running time between Cleveland and Toledo about five minutes. The present line follows the shore of Lake Erie between Huron and Rye Beach.

Springfield & Washington Railway, South Charleston, Ohio.—As soon as the weather permits this company will build an extension from South Charleston to Washington C. H., a distance of 20 miles. More than $300,000 has been subscribed and as soon as the grading is completed application will be made to the Public Service Commission to issue an addition $250,000 in stock to extend the railway to Chillicothe.

Oklahoma (Okla.) Railway.—About 10 miles of new track will be built by this company during 1912.

Mt. Hood Railway & Power Company, Portland, Ore.—This company plans to build 10 miles of new track during 1912.

Southern Cambria Railway, Johnstown, Pa.—This company plans to build 10 miles of new track from Ebensburg to Carrolltown during 1912.

Lancaster & Southern Street Railway, Lancaster, Pa.—This company plans to built ¾ mile of track during 1912.

West Penn Railways, Pittsburgh, Pa.—It is reported that this company plans to build extensions to Washington, Waynesboro and other towns.

Snow Shoe Electric & Street Railway, Snow Shoe, Pa.—This company advises that it will begin construction next summer on its 2-mile railway between Snow Shoe and Clarence. J. M. Shearer, Snow Shoe, president. [E. R. J., Dec. 16, '11.]

Philadelphia & Western Railway, Upper Darby, Pa.—During 1912 this company plans to construct 13 miles of new track.

Chambersburg, Greencastle & Waynesboro Street Railway, Waynesboro, Pa.—About 2 miles of track will be built by this company during 1912.

Montreal & Southern Counties Railway, Montreal, Que.—This company plans to build 25 miles of new track during 1912.

Nashville Railway & Light Company, Nashville, Tenn.—This company plans to build an extension of its lines at once to the new amusement park at Buena Vista Springs, a short distance from Nashville.

Paris (Tex.) Transit Company.—During the next month this company will award contracts to build several turnouts and crossings in Paris.

Salt Lake & Ogden Electric Railway, Salt Lake City, Utah.—Plans are being considered by this company to build an interurban line from Salt Lake to Nephi, taking in the principal towns of southern Salt Lake County, Utah County and Juab County.

Bellows Falls & Saxton's River Street Railway, Bellows Falls, Vt.—Plans are being considered by this company for the construction of several extensions of its lines.

Highland Park & Lake Burien Railway, Seattle, Wash.—This company has finished the grading and is now laying the rails on its 10-mile electric railway from the junction of Spokane Avenue and Iowa Street, Seattle, and terminating on the hill south of Lake Burien, near Three Tree Point. Ultimately the company will extend the line to Des Moines, a distance of 5 miles. W. H. Murphy, Seattle, president. [E. R. J., Jan. 6, '12.]

Milwaukee Western Electric Railway, Milwaukee, Wis.—Work is being done by this company grading a section of its 74-mile railway. The company expects to build the roadbed and begin construction within the year.

SHOPS AND BUILDINGS

Pacific Electric Railway, Los Angeles, Cal.—Work has been begun by this company enlarging its present waiting room in the building at Sixth Street and Main Street in Los Angeles. It is intended to spend $100,000 in making necessary changes.

Oakland (Cal.) Traction Company.—All the offices of this company, which have been located at Twenty-second Street and San Pablo Avenue, will be located in the building of the Realty Syndicate on Broadway, between Fourteenth and Fifteenth Streets, in Oakland. They will occupy the second, third and ninth floors.

New Orleans Railway & Light Company, New Orleans, La.—This company is making preliminary plans for the construction of new repair shops in New Orleans.

Hattiesburg (Miss.) Traction Company.—Extensive improvements are being planned by this company at its carhouse. A large addition will be built, 85 ft. x 35 ft., and the capacity of the carhouse will be doubled. A paint shop and repair shop will also be built and the company will install all necessary machinery for overhauling its cars.

Hudson & Manhattan Railroad, New York, N. Y.—This company has begun work on construction of a new addition to the Hudson Terminal Building, the structure to be located at 48 Dey Street and extending through to Fulton Street. The architects are Clinton & Russell, and the general contractor is Thomas J. Steen, New York.

Syracuse (N. Y.) Rapid Transit Company.—This company has awarded contracts to the Automatic Sprinkler Company of America for the installation of automatic sprinkler systems in the following buildings: Wolf Street carhouse and car yard, Wolf Street repair shops, Tallman Street carhouse and Cortland Street carhouse, all located in Syracuse.

Utica & Mohawk Valley Railway, Utica, N. Y.—On Feb. 9 contracts were awarded by this company to the Automatic Sprinkler Company of America for the installation of automatic sprinkler systems in the following buildings: Main Street carhouse, express depot, Utica Park carhouse and repair shops, located in Utica, N. Y., and carhouse in Rome and carhouse in Mohawk.

West Penn Railways, Pittsburgh, Pa.—This company has purchased property in Uniontown for a terminal site. It is reported that a three-story terminal station will be erected, and that the present headquarters at Connellsville will be moved to Uniontown.

Chattanooga, Rome & Atlanta Railway, Chattanooga, Tenn.—It is reported that this company plans to build a new depot in Chattanooga. Charles Reif, president.

Wheeling (W. Va.) Traction Company.—This company will soon build new repair shops and an addition to its office building in Wheeling.

POWER HOUSES AND SUBSTATIONS

East Shore & Suburban Railway, Richmond, Cal.—This company has purchased a 1,500-kw Westinghouse motor-generator set complete with switchboard, etc.

Hattiesburg (Miss.) Traction Company.—It is reported that this company plans extensive improvements at its power house.

Sand Springs Interurban Railway, Tulsa, Okla.—Work has been begun by this company on the construction of a new power plant and substation at Sand Springs.

Eastern Texas Traction Company, Greenville, Tex.—This company plans to build its new power house and general offices at Greenville in the near future. J. B. Murphy, Greenville, general manager. [E. R. J., Feb. 17, '12.]

Spokane & Inland Empire Railroad, Spokane, Wash.—During the next few months this company will award contracts to build a new small frame substation at Vera. The company expects to purchase soon three 350-kw transformers and auxiliary equipment.

Wheeling (W. Va.) Traction Company.—This company plans to build in the near future a new substation in Wheeling.

Eastern Wisconsin Railway & Light Company, Fond du Lac, Wis.—During the next six months this company expects to purchase a steam turbine and rotary converter.

Manufactures and Supplies

ROLLING STOCK

Elkins (W. Va.) Electric Railway expects to purchase two double-truck cars.

Aroostook Valley Railroad, Presque Isle, Maine, expects to purchase two passenger cars.

Toronto & York Radial Railway, Toronto, Ont., expects to purchase five passenger cars and three express cars.

Central California Traction Company, San Francisco, Cal., has placed an order with the American Car Company for two 27-M.C.B.-3 trucks.

Winnipeg (Man.) Electric Railway is building thirty cars in its own shops. They will be equipped with Brill 27-GE-1 trucks, GE-80 motors and General Electric air brakes.

Des Moines (Ia.) City Railway has ordered ten 28-ft. 10-in. closed motor car bodies mounted on Brill 62-E trucks from the American Car Company.

Detroit (Mich.) United Railway has ordered fifty 31-ft. 3-in. special pay-as-you-enter double-truck cars from the G. C. Kuhlman Car Company.

Stockton, Terminal & Eastern Railway, Stockton, Cal., has ordered one 41-ft. gasoline motor car mounted on Holman standard trucks from W. L. Holman Company.

Oakland, Antioch & Eastern Railway, Oakland, Cal., ordered last month from W. L. Holman Company four 56-ft. combination three-compartment coaches, mounted on Baldwin trucks.

Grand Junction & Grand River Valley Railway, Grand Junction, Col., noted in the Electric Railway Journal of Feb. 10, 1912, as considering the purchase of several cars, has purchased three semi-steel, double-truck, single-end pay-as-you-enter cars from the Southern Car Company.

TRADE NOTES

Crane Company, Chicago, Ill., has leased the northeast corner of Michigan Boulevard and Eldredge Place, 40 ft x 160 ft., on which it will build a new office building of eight or ten stories.

Coleman B. Ross, formerly with the Linde Air Products Company, Buffalo, N. Y., has become connected with the Independent Pneumatic Tool Company, Chicago, with office in Pittsburgh, Pa.

American Conduit Manufacturing Company, Pittsburgh, Pa., has received the contract for the conduit for wiring the 500 near-side cars which The J. G. Brill Company is building for the Philadelphia Rapid Transit Company.

Wheeler Condenser & Engineering Company, Carteret, N. J., has moved its Cincinnati office from 111 Ingalls Building to offices in the Mercantile Library Building of the same city. The new office will be in charge of Richard L. Strobridge, who was formerly connected with the Boston office of the company.

Hambleton & Company, Baltimore, Md., are offering, subject to prior sale, T. H. Symington Company first mortgage convertible sinking-fund gold 6's, due July 1, 1920, interest January and July, at 100 and interest, netting 6 per cent. These bonds are an absolute first and closed mortgage on all the properties, plants, patents, rights and franchises of the company.

H. T. Brown, formerly with the Nashville office of the General Electric Company, has opened an office at 700 Broadway as consulting mechanical and electrical engineer. Mr. Brown, before going with the General Electric Company in its Nashville office, was with Stone & Webster, Boston, and prior to his connection with that firm was with the Williams-Middendorf Syndicate. Mr. Brown has had over eighteen years' practical experience with both manufacturing and operating companies and expects to give his clients the advantage of this experience.

George W. Lord Company, Philadelphia, Pa., has received a contract for 1912 from the United States government for marine boiler compound, amounting to 125,000 lb. This company has recently increased its organization and now has not only better facilities for manufacturing and selling water-purifying chemicals, but it has also invaded the filter field with an apparatus which was described in the issue of this paper for Feb. 13. This puts the company in position to supply the needs of its patrons with whatever system is best adapted to the conditions existing in their individual plants.

Western Electric Company, New York, reports its January sales about 9 per cent behind those of January, 1911, sales being goods billed out, but that new business for the month was $500,000 in excess of the goods billed. January of last year started at a rate that indicated about $71,000,000 for the year, so that the comparison of the two months is not so unfavorable to last month as indicated. January's total is at the rate of about $67,000,000 for the year, or approximately the same as 1911, whose total was $66,300,000. The falling off was general, the eastern and central sections showing about a 9 per cent decrease, while the southern and western sections did a little better than that. Foreign business shared in the decrease, but not to the extent of domestic business.

H. W. Johns-Manville Company, New York, N. Y., held the annual convention of managers and salesmen of its electrical department during the week of Feb. 5-10 in the new Manville Building, New York, and at Hartford, Conn. Over 100 representatives were in attendance. At the meetings in New York electrical subjects were discussed. On Feb. 7 two special cars conveyed the delegates to Hartford, Conn., where the factory of the allied Johns-Pratt Company is located. At the factory session on Feb. 8 fuses and fuse boxes were discussed. In the evening tests of high-tension fuses and boxes were made at the factory laboratory. On Feb. 10 the visitors inspected the factory and also the substations of the Hartford Electric Light Company. A banquet, which was held on Saturday evening at the Hartford Club, concluded the convention.

H. M. Byllesby & Company, Chicago, Ill., have ordered ten pulmotors for installation at ten of the important Byllesby properties, delivery to be made as soon as possible. The pulmotor is a machine manufactured by the Draeger Oxygen Apparatus Company, Pittsburgh, Pa., to aid in the resuscitation of persons overcome by asphyxiation, electric shock or poisoning—in all cases where respiration has been suspended or restricted. The properties selected for the initial installation are those at Pueblo, Col.; St. Paul, Minn.; Fort Smith, Ark.; Mobile, Ala.; Muskogee, Okla.; Oklahoma City, Okla.; Eugene, Ore.; San Diego, Cal.; Stockton, Cal., and Tacoma, Wash. The Commonwealth Edison Company, of Chicago, has tried out two of these machines during the past three months and has demonstrated their value in saving lives, particularly in cases where physicians have given the patient up for lost. If the experience with these machines is satisfactory, pulmotors will be installed at every Byllesby property in a short time.

ADVERTISING LITERATURE

National Tube Company, Pittsburgh, Pa., has just issued its bulletin for January, 1912, containing a discussion of the corrosion of boiler tubes.

Uehling Recording Instrument Company, Passaic, N. J., has issued Bulletin No. 102, which describes and illustrates the company's various types of recorders and the standard charts for use in connection with these instruments.

General Electric Company, Schenectady, N. Y., has issued Bulletin No. 4920 describing its GE-203A railway motor, which is of the box frame, commutating pole type, rated at 50 hp on 600 volts and 40 hp on 500 volts. Bulletin No. 4918 illustrates and describes panels designed for general use in central stations. The list of panels contains both generator and feeder types and the panels are made for 125, 225 and 600 volts. Bulletin No. 4887 illustrates and describes the company's turbo-generator sets in capacities of from 5 kw to 300 kw. All of these sets are of the horizontal type and can be arranged to operate either condensing or non-condensing and at any steam pressure above 80 lb. for the smaller sizes and 100 lb. for the larger. Bulletin No. 4924 describes the company's Thomson prepayment watt-hour meters for direct-current and alternating-current types CP-4 and IP-4. Bulletin No. 4919 is devoted to a description of panels which are designed for the control of three-wire generators. The panels are arranged for 125 volts and 250 volts and in capacities of from 25 kw. to 100 kw.